STudent questionnaire for pisa 2012

Field Trial

All notes version

December 2010

This version includes reference notes for National Project Managers, translators and test administrators

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INTRODUCTION

PURPOSE OF THIS DOCUMENT

1. This 'notes version' of the PISA 2012 Field Trial student questionnaire is designed to assist National Project Managers and translators adapt and translate the 'no-notes' version of the student questionnaire in a consistent and internationally comparable way.

2. Notes accompanying each question may include:

   Notes for the National Project Manager clarifying terms and options, noting where adaptations should be made, and providing the rationale for the question's inclusion, with references to the constructs and the research areas of focus described in the Contextual Framework.

   Notes for the Translator stating whether questions have been used before or are new to PISA. It is highlighted if questions are identical to those used in previous cycles and/or if questions are adapted versions of questions from previous cycles.

   Notes to be used by Test Administrators. Note that where a country has adapted a question, it may be necessary for the National Project Manager to add notes that will assist the Test Administrator to answer student questions. The notes for Test Administrators will appear in the 'TA notes' version which is sent for linguistic verification. NPMs may print copies of the TA notes versions for their Test Administrators (the print quality standard does not apply to the TA notes version).National Project Managers should feel free to elaborate upon these notes to assist the Test Administrators. These elaborations will, however, require approval from the consortium.

CONVENTIONS IN THIS DOCUMENT

3. The inclusion of text within < > brackets means that the national centre is required to insert a word or phrase which is appropriate for that country. In some cases adaptation is required: for example in <test language> or <ISCED level>. In other cases adaptation is optional: for example <Grade 1> or <School's governing board> may not need adaptation, and may be directly translated where the test language is not a source language.

4. Subscripts are used on the response boxes. These are used to increase the accuracy of data entry. These should be retained and any proposed changes should be listed on the Questionnaire Adaptation Spreadsheet and agreed upon between the National Project Manager and the Consortium.

5. All text in green appears only in this 'notes' version of the questionnaire. The blue test administration notes appear in this version and the 'TA notes' version of the student questionnaire, which is sent for linguistic verification. The 'no notes' version will contain only the black font text.

Notes for National Project Manager

Front cover: National Project Managers may change the text and layout of the front cover but approval for these changes is needed. Proposed adaptations to the cover should be submitted in the Common Booklet Parts Adaptation Spreadsheet and approved by the Consortium. Refer to the National Project Manager manual for instructions on this.

The word ‘mathematics’ appears throughout the questionnaire. In some countries this needs to be adapted to the national context. This will need to be described in the Questionnaire Adaptation Spreadsheet and agreed between the NPM and the Consortium. The adaptation will need to be consistent throughout the Questionnaire.

NOTE 1

In this booklet you will find questions about:

- About You (Section A)
- About Your Family and Home (Section B)
- About Learning Mathematics (Section C)
- About Your Mathematics Experiences (Section D)
- About Your School (Section E)
- About Your Problem Solving Experiences (Section F)

Please read each question carefully and answer as accurately as you can. In the test you usually circle your answers. For this questionnaire, you will normally answer by ticking a box. For a few questions you will need to write a short answer.

If you make a mistake when ticking a box, cross out your error and check the correct box. If you make an error when writing an answer, simply cross it out and write the correct answer next to it.

In this questionnaire, there are no 'right' or 'wrong' answers. Your answers should be the ones that are 'right' for you.

You may ask for help if you do not understand something or are not sure how to answer a question.

Your answers will be combined with others to make totals and averages in which no individual can be identified. All your answers will be kept confidential.

Notes for National Project Manager

Because of the rotation design, the number of sections may vary in each of the four booklets.

If international or national options are in the same booklet as the Student Questionnaires, National Project Managers may treat them as separate sections and add them to the list of sections in the introduction.

SECTION <A>: ABOUT YOU

ST01Q01

ST01

Q What <grade> are you in?

_____

<grade>

Notes for National Project Manager:

This question has been retained from the PISA 2009 Main Survey (StQ01). This measures the student's grade level. The question also allows cross-checking with Student Tracking Forms for data cleaning purposes.

Stem & answer line: **<Grade>** - refers to the administrative level of the student in the school. The number of years in schooling is the usual measure of grade. It does not mean the name of a class. NPMs will be required to provide a 'mapping' of grade onto an international standard with Grade 1 as the first year of ISCED 1 (=Primary/Elementary School).

In countries where students may be in different grades/year levels for different courses, an adequate adaptation to this question that can be understood by students is required.

Adaptations to this question are a requirement. They need to be described in the Questionnaire Adaptation Spreadsheet and agreed between the NPM and the Consortium.

Notes for Translator:

This question was worded identically in the PISA 2009 Main Survey (StQ01).

ST02Q01

ST02

Q Which one of the following <programmes> are you in?

(Please tick only one box.)

<Programme 1> ☐ 01

<Programme 2> ☐ 02

<Programme 3> ☐ 03

<Programme 4> ☐ 04

<Programme 5> ☐ 05

<Programme 6> ☐ 06

Notes for National Project Manager:

This question has been retained from the PISA 2009 Main Survey (StQ02). Measures the programme the student is in. It also allows cross-checking with Student Tracking Forms for data cleaning purposes.

Stem & answer categories: **<Programme>: The list of programmes should be the same as in the Study Programme Table.** It is necessary to phrase study programme labels in such a way that students will easily understand.

The subscript codes should match the numeric variable in the Study Programme Table._

In countries where all students study the same programme, this question may be omitted but this will need to be recorded in the QAS and agreed to between the NPM and the Consortium.

Adaptations to this question are a requirement. They need to be described in the Questionnaire Adaptation Spreadsheet and agreed between the NPM and the Consortium.

Notes for Translator:

This question was worded identically in the PISA 2009 Main Survey (StQ02).

ST03Q01-ST03Q03

ST03

Q On what date were you born?

(Please write the day, month and year you were born.)

_____ _____ *19*___

Day *Month* *Year*

Notes for National Project Manager:

This question has been retained from the PISA 2009 Main Survey (StQ03). This item provides a measure of chronological age. The question also allows cross-checking with Student Tracking Forms for data cleaning purposes.

Changes made to the DD MM YY order will require changes to be made in the data entry software. **Please describe any modifications in the Questionnaire Adaptations Spreadsheet**.

Notes for Translator:

This question was worded identically in the PISA 2009 Main Survey (StQ03).

Note that the preference is for the order of DD MM YY to be preserved, but if students are likely to be confused by this, then the local convention should be adopted.

ST04Q01

ST04

Q Are you female or male?

Female ☐ 1

Male ☐ 2

Notes for National Project Manager:

This question has been retained from the PISA 2009 Main Survey (StQ04).

This question allows cross-checking for data cleaning purposes and provides information on student performance and gender research.

Notes for Translator:

This question was worded identically in the PISA 2009 Main Survey (StQ04).

ST05Q01

ST05

Q Did you attend <ISCED 0>?

No ☐ 1

Yes, for one year or less ☐ 2

Yes, for more than one year ☐ 3

Notes for National Project Manager:

This question has been retained from the PISA 2009 Main Survey (StQ05). This variable provides information on the early educational career of the student.

Stem: **<ISCED 0>** - This level refers to pre-primary education defined as the initial stage of organised instruction designed primarily to introduce very young children to a school-type environment. Instruction is school-based or centre-based, typically for children between 3 and 6 years.

Adaptations to this question are a requirement. They need to be described in the Questionnaire Adaptation Spreadsheet and agreed between the NPM and the Consortium.

Notes for Translator:

This question was worded identically in the PISA 2009 Main Survey (StQ05).

The expression 'ISCED 0' should not be used as the respondent will not understand it.

ST06Q01

ST06

Q How old were you when you started <ISCED 1>?

_____ *Years*

Notes for National Project Manager:

This question has been retained from the PISA 2009 Main Survey (StQ06). This variable provides information on the early educational career (starting age) of the student.

Stem: **<ISCED 1>** - This refers to primary education which begins between age 5 and 7 and generally lasts 4 years (e.g. Germany) to 6 years (mode of OECD countries). Primary education is designed to provide a sound basic education in reading, writing and mathematics along with an elementary understanding of other subjects.

Adaptations to this question are a requirement. They need to be described in the Questionnaire Adaptation Spreadsheet and agreed between the NPM and the Consortium.

Notes for Translator:

This question was worded identically in the PISA 2009 Main Survey (StQ06).

Do NOT use the expression 'ISCED 1' as the respondent will not understand it.

Q<6>: Notes for Test Administrator:

Encourage students to calculate their starting ages if they cannot remember it.

ST07Q01-ST07Q03

ST07

Q Have you ever repeated a <grade>?

(Please tick only one box in each row.)

	No, never	*Yes, once*	*Yes, twice or more*
a) At <ISCED 1>	☐ 1	☐ 2	☐ 3
b) At <ISCED 2>	☐ 1	☐ 2	☐ 3
c) At <ISCED 3>	☐ 1	☐ 2	☐ 3

Notes for National Project Manager:

This question has been retained from the PISA 2009 Main Survey (StQ07). This variable provides information on the past educational career of the student (specifically whether or not they have repeated a grade level).

Stem: **<Grade>** - This term refers to the administrative level of the student in the school. In many countries, the number of years in schooling is the usual measure of grade.

The response categories used for this question need to be mapped to the ISCED levels. See the ISCED Manual for the definition of ISCED levels. If there are special circumstances in your country, you should provide clarification for Test Administrators in notes in the Test Administrator Manual.

Item c): If there are no 15-year-old students at <ISCED 3> in a country National Project Managers may omit this item.

There are countries in which it is not possible to repeat a grade. In that case the question must be deleted.

Adaptations to this question are a requirement. They need to be described in the Questionnaire Adaptation Spreadsheet and agreed between the NPM and the Consortium.

Notes for Translator:

This question was worded identically in the PISA 2009 Main Survey (StQ07).

The expression ‘ISCED 1’, ISCED 2’ or ‘ISCED 3’ should NOT be used as respondents will not understand them.

Q<7>: Notes for Test Administrator

Students who are still studying in <ISCED 2> should skip the third item (in countries with students on <ISCED level 1> a similar instruction should be given).

SC08Q01

ST08

Q In the last full two weeks you were in school, how many times did you arrive late for school?

(Please tick only one box.)

None ☐ 1

One or two times ☐ 2

Three or four times ☐ 3

Five or more times ☐ 4

Notes for National Project Manager:

This question has been reintroduced from the PISA 2003 Main Survey (StQ28) and, together with other questions, provides information on truancy and absenteeism.

Notes for Translator:

This question was worded identically in the PISA 2003 Main Survey (StQ28).

SC09Q01

ST09

Q In the last two full weeks you were in school, how many times did you <skip> school?

(Please tick only one box.)

None ☐ 1

One or two times ☐ 2

Three or four times ☐ 3

Five or more times ☐ 4

Notes for National Project Manager:

This question has been reintroduced from the PISA 2000 Main Survey (StQ29) and it provides information on truancy and absenteeism.

Stem: **<skip>** - unauthorised failure to attend classes.

Notes for Translation

This question is worded similarly to that in the PISA 2000 Main Survey (StQ29). The stem and items have been updated.

SC10Q01

ST10

Q In the last two full weeks you were in school, how many times did you <miss> school?

(Please tick only one box.)

None ☐ 1

One or two times ☐ 2

Three or four times ☐ 3

Five or more times ☐ 4

Notes for National Project Manager:

This question has been reintroduced from the PISA 2000 Main Survey (StQ29) and it provides information on truancy and absenteeism.

Stem: **<miss>** school - may be authorised or unauthorised non attendance at the school.

Notes for Translation

This question is worded similarly to that in the PISA 2000 Main Survey (StQ29). The stem and items have been updated.

SECTION <B>: ABOUT YOUR FAMILY AND HOME

NOTE 2

In this section you will be asked some questions about your family and your home.

Some of the following questions are about your mother and father or those persons who are like a mother or father to you — for example, guardians, step-parents, foster parents, etc.

If you share your time with more than one set of parents or guardians, please answer the following questions for those parents/guardians you spend the most time with.

ST11Q01-ST11Q06

ST11

Q Who usually lives at <home> with you?

(Please tick one box in each row.)

	Yes	*No*
a) Mother (including stepmother or foster mother)	☐ 1	☐ 2
b) Father (including stepfather or foster father)	☐ 1	☐ 2
c) Brother(s) (including stepbrothers)	☐ 1	☐ 2
d) Sister(s) (including stepsisters)	☐ 1	☐ 2
e) Grandparent(s)	☐ 1	☐ 2
f) Others (e.g. cousin)	☐ 1	☐ 2

Notes for National Project Manager:

This question has been retained from the PISA 2009 Main Survey (StQ08). This question establishes the student's current caregivers.

Stem: **<home>** - refers to that place where the student usually resides, not including boarding school. The term used should connote a family or domestic setting.

Adaptations to this question are a requirement. They need to be described in the Questionnaire Adaptation Spreadsheet and agreed between the NPM and the Consortium.

Notes for Translator:

This question was worded identically in the PISA 2009 Main Survey (StQ08).

Q<11>: Notes for Test Administrator:

If a student belongs to two households then the questions refer to the household in which he or she spends most time. If a student says he or she spends equal time in two households, then he or she may choose either household, but consistently answer 'Home' questions for the chosen household.

ST12Q01-ST12Q02

Q What is your mother's main job?
(e.g. school teacher, kitchen-hand, sales manager)

(If she is not working now, please tell us her last main job.)

Please write in the job title. _____

Q What does your mother do in her main job?
(e.g. teaches high school students, helps the cook prepare meals in a restaurant, manages a sales team)

Please use a sentence to describe the kind of work she does or did in that job.

_____

Notes for National Project Manager:

This question has been retained from the PISA 2009 Main Survey (StQ09). This question establishes the mother of the student's main occupation and is used to generate International Standard Classification of Occupations (ISCO) codes. Please remember to use the ISCO-08 version of the codes.

Stem 1: Examples - It is acceptable to change the examples to more nationally relevant jobs. Do not use obscure or lengthy job titles.

Answer line 1: 'job title' - is the common name of the job. Please use an appropriate term.

Stem 2: Use examples that match the job titles given in stem 1.

Notes for Translator:

This question was worded identically in the PISA 2009 Main Survey (StQ09).

Q<12>: Notes for Test Administrator:

'main job': If the mother has more than one job, her 'main job' is the job in which most time is spent, not necessarily the highest earning job.

If the mother is working at home, doing home duties, please instruct the student to describe this as 'working at home, doing home duties'.

If a student's mother (or equivalent female guardian) is deceased, then her last job can still be provided – but if this is unknown the question should be left blank.

Encourage students to answer this question. A general description such as 'works in an office' is better than nothing written at all.

ST13Q01

ST13

Q What is the <highest level of schooling> completed by your mother?

If you are not sure which box to choose, please ask the test administrator for help.

(Please tick only one box.)

<ISCED level 3A> ☐ 1

<ISCED level 3B, 3C> ☐ 2

<ISCED level 2> ☐ 3

<ISCED level 1> ☐ 4

She did not complete <ISCED level 1> ☐ 5

Notes for National Project Manager:

This question has been retained from the PISA 2009 Main Survey (StQ10). This item establishes the mother of the student's highest level of education.

Stem: **<highest level of schooling>** should be adapted to refer to the sections of schooling that correspond to ISCED levels 1 to 3.

The categories need to be specified using country-specific terms that will be understood by the students responding to the question. Each category needs to be mapped to the ISCED classification of educational levels (see *Classifying Educational Programmes – Manual for ISCED-97 Implementation in OECD Countries*, 1999 Edition, OECD). The following information about ISCED is taken from this manual.

ISCED Level 1: Primary level of education.

ISCED Level 2: Lower secondary level of education.

ISCED Level 3A: Upper secondary level of education with programmes designed to provide direct access to ISCED 5A.

ISCED Level 3B: Upper secondary level of education with programmes designed to provide direct access to ISCED 5B. Level 3B tends to be more practical and has a vocational orientation.

ISCED Level 3C: Upper secondary level of education with programmes designed to provide direct access to the labour market.

In some countries there may not be an administrative or structural boundary between ISCED 2 and 3 in the educational system. In these cases one may ask about completion of the grade/year level that can be defined as an implicit boundary between ISCED level 2 and 3.

Adaptations to this question are a requirement. They need to be described in the Questionnaire Adaptation Spreadsheet and agreed between the NPM and the Consortium.

Qualifications obtained abroad - increasingly, students have parents whose qualifications were obtained abroad and these may not match the nationally specific categories listed in the questionnaire. The student has been instructed to ask the test administrator if they have any doubt about which option to choose. NPMs should provide some guidelines to Test Administrators in their training on the equivalence of local qualifications to those obtained abroad. The match does not have to be exact. It is more important to try to distinguish between the three general levels: ISCED 5A and above, ISCED 3, and below ISCED 3. The test administrator should ask the student appropriate questions to identify which of the three levels most closely corresponds.

Notes for Translator:

This question was worded identically in the PISA 2009 Main Survey (StQ10). Do NOT use the expressions ‘ISCED 3A’, ‘ISCED 3B’ etc. as the respondent will not understand them.

Q<13>: Notes for Test Administrator:

This question is asking about completion; that is, obtaining a qualification. Just attending an institution where these qualifications can be obtained is not sufficient.

If a student’s mother (or equivalent female guardian) is deceased, then her qualifications can still be provided – but if this is unknown the question should be left blank.

If the student’s mother obtained her qualifications abroad, please help the student to choose the response from the list that is closest. Asking questions like “How long did she go to school for?” and “Did she go on to university?” should help clarify.

ST14Q01-ST14Q04

ST14

Q Does your mother have any of the following qualifications?

If you are not sure how to answer this question, please ask the test administrator for help.

(Please tick one box in each row.)

	Yes	*No*
a) <ISCED level 6>	☐ 1	☐ 2
b) <ISCED level 5A>	☐ 1	☐ 2
c) <ISCED level 5B>	☐ 1	☐ 2
d) <ISCED level 4>	☐ 1	☐ 2

Notes for National Project Manager:

This question has been retained from the PISA 2009 Main Survey (StQ11). This item establishes whether or not the mother of the student has certain educational qualifications.

The categories need to be specified using country-specific terms that will be understood by the students. Each qualification needs to be mapped to the ISCED classification of educational levels (see *Classifying Educational Programmes – Manual for ISCED-97 Implementation in OECD Countries*, 1999 Edition, OECD). The following information about ISCED is taken from this manual.

ISCED Level 6: Advanced research qualification, devoted to advanced study and original research, requiring submission of a thesis or dissertation of publishable quality.

ISCED Level 5A: Qualification obtained from a tertiary study programme with a strong theoretical foundation *typically* with a minimum duration of three years' full time equivalent, providing entry into a profession with high skills requirements or an advanced research programme.

ISCED Level 5B: Qualification obtained in tertiary programmes that are generally more practical/technical/occupationally specific and typically shorter than ISCED 5A programmes. Typically, these programmes have a minimum of two years' full-time equivalent duration and prepare students to enter a particular occupation.

ISCED Level 4: Qualification obtained in programmes that overlap the boundary between upper-secondary and post-secondary education. They are typically not significantly more advanced than programmes at Level 3 and have a full-time equivalent duration of between 6 months and 2 years.

Adaptations to this question are a requirement. They need to be described in the Questionnaire Adaptation Spreadsheet and agreed between the NPM and the Consortium.

Notes for Translator:

This question was worded identically in the PISA 2009 Main Survey (StQ11).Do NOT use the expressions 'ISCED 5A', 'ISCED 5B' etc. as the respondent will not understand them.

Q<14>: Notes for Test Administrator:

This question is asking about completion; that is, obtaining a qualification. Just attending an institution where these qualifications can be obtained is not enough.

If a student's mother (or equivalent female guardian) is deceased, then her qualifications can still be provided – but if this is unknown the question should be left blank.

If a student has a mother who was trained in a non-university setting but currently has an occupation requiring university education for admission (common examples are teaching, nursing and some accounting occupations) he or she may use response category b).

If the student's mother obtained her qualifications abroad, please help the student to choose the response from the list that is closest. Asking questions like "Did she go to university?" should help clarify.

ST15Q01

ST15

Q What is your mother currently doing?

(Please tick only one box.)

Working full-time <for pay> ☐ 1

Working part-time <for pay> ☐ 2

Not working, but looking for a job ☐ 3

Other (e.g. home duties, retired) ☐ 4

Notes for National Project Manager:

This question has been retained from the PISA 2009 Main Survey (StQ12).

This item provides information on the mother of the student's current employment status; as well as additional information on social background.

Notes for Translator:

This question was worded identically in the PISA 2009 Main Survey (StQ12).

Q<15>: Notes for Test Administrator:

Students should answer this question with regard to their mother's main occupation. If e.g. the mother is working part-time but also doing home duties, students should <tick> b) 'working part-time'.

If a student has no mother (or equivalent female guardian), then he or she should leave this question blank.

Please note that students should tick only one box.

ST16Q01-ST16Q02

ST16

Q What is your father's main job?
(e.g. school teacher, kitchen-hand, sales manager)

(If he is not working now, please tell us his last main job.)

Please write in the job title. _____

Q What does your father do in his main job?
(e.g. teaches high school students, helps the cook prepare meals in a restaurant, manages a sales team)

Please use a sentence to describe the kind of work he does or did in that job.

_____

Notes for National Project Manager:

This question has been retained from the PISA 2009 Main Survey (StQ13). This question establishes the father of the student's main occupation and is used to generate International Standard Classification of Occupations (ISCO) codes. Please remember to use the ISCO-08 version of the codes.

Stem 1: Examples - it is acceptable to change the examples to more nationally relevant jobs. Please use examples that will help students to place a name on the job title. Do not use obscure occupational titles.

Answer line 1: 'job title' - is the common name of the job. Please use an appropriate term.

Stem 2: Use examples that match the job title examples given in stem 1.

Notes for Translator:

This question was worded identically in the PISA 2009 Main Survey (StQ13).

Q<16>:Notes for Test Administrator:

'main job': If the father has more than one job, his 'main job' is the job in which most time is spent, not necessarily the highest earning job.

If the father is working at home, doing home duties, please instruct the student to describe this as 'working at home, doing home duties'.

If a student's father (or equivalent male guardian) is deceased, then his last job can still be provided - but if this is unknown the question should be left blank.

Encourage students to answer this question. A general description such as 'works in an office' is better than nothing written.

ST17Q01

Q What is the <highest level of schooling> completed by your father?

If you are not sure how to answer this question, please ask the <test administrator> for help.

(Please tick only one box.)

<ISCED level 3A> ☐ 1

<ISCED level 3B, 3C> ☐ 2

<ISCED level 2> ☐ 3

<ISCED level 1> ☐ 4

He did not complete <ISCED level 1> ☐ 5

Notes for National Project Manager:

This question has been retained from the PISA 2009 Main Survey (StQ14). This item establishes the father of the student's highest level of education.

Stem: **<highest level of schooling>** should be adapted to refer to the sections of schooling that correspond to ISCED levels 1 to 3.

The categories need to be specified using country-specific terms that will be understood by the students responding to the question. Each category needs to be mapped to the ISCED classification of educational levels (see *Classifying Educational Programmes – Manual for ISCED-97 Implementation in OECD Countries*, 1999 Edition, OECD). The following information about ISCED is taken from this manual.

ISCED Level 1: Primary level of education.

ISCED Level 2: Lower secondary level of education.

ISCED Level 3A: Upper secondary level of education with programmes designed to provide direct access to ISCED 5A.

ISCED Level 3B: Upper secondary level of education with programmes designed to provide direct access to ISCED 5B. Level 3B tends to be more practical and has a vocational orientation.

ISCED Level 3C: Upper secondary level of education with programmes designed to provide direct access to the labour market.

In some countries there may not be an administrative or structural boundary between ISCED 2 and 3 in the educational system. In these cases one may ask about completion of the grade/year level that can be defined as an implicit boundary between ISCED level 2 and 3.

Adaptations to this question are a requirement. They need to be described in the Questionnaire Adaptation Spreadsheet and agreed between the NPM and the Consortium.

Notes for Translator:

This question was worded identically in the PISA 2009 Main Survey (StQ14).

Do NOT use the expressions 'ISCED 3A', 'ISCED 3B' etc. as the respondent will not understand them.

Q<17>: Notes for Test Administrator:

This question is asking about completion, that is, obtaining a qualification. Just attending an institution where these qualifications can be obtained is not enough.

If a student's father (or equivalent male guardian) is deceased, then his qualifications can still be provided – but if this is unknown the question should be left blank.

If the student's father obtained his qualifications abroad, please help the student to choose the response from the list that is closest. Asking questions like "How long did he go to school for?" and "Did he go to university?" should help clarify.

ST18Q01-ST18Q04

ST18

Q Does your father have any of the following qualifications?

If you are not sure which box to choose, please ask the <test administrator> for help.

(Please tick one box in each row.)

	Yes	*No*
a) <ISCED level 6>	☐ 1	☐ 2
b) <ISCED level 5A>	☐ 1	☐ 2
c) <ISCED level 5B>	☐ 1	☐ 2
d) <ISCED level 4>	☐ 1	☐ 2

Notes for National Project Manager:

This question has been retained from the PISA 2009 Main Survey (StQ15). This item establishes whether or not the father of the student has certain educational qualifications.

The categories need to be specified using country-specific terms that will be understood by the students. Each qualification needs to be mapped to the ISCED classification of educational levels (see *Classifying Educational Programmes – Manual for ISCED-97 Implementation in OECD Countries*, 1999 Edition, OECD). The following information about ISCED is taken from this manual.

ISCED Level 6: Advanced research qualification, devoted to advanced study and original research, requiring submission of a thesis or dissertation of publishable quality.

ISCED Level 5A: Qualification obtained from a tertiary study programme with a strong theoretical foundation *typically* with a minimum duration of three years' full time equivalent, providing entry into a profession with high skills requirements or an advanced research programme.

ISCED Level 5B: Qualification obtained in tertiary programmes that are generally more practical/technical/occupationally specific and typically shorter than ISCED 5A programmes. Typically, these programmes have a minimum of two years' full-time

equivalent duration and prepare students to enter a particular occupation.

ISCED Level 4: Qualification obtained in programmes that overlap the boundary between upper-secondary and post-secondary education. They are typically not significantly more advanced than programmes at Level 3 and have a full-time equivalent duration of between 6 months and 2 years.

Adaptations to this question are a requirement. They need to be described in the Questionnaire Adaptation Spreadsheet and agreed between the NPM and the Consortium.

Notes for Translator:

This question was worded identically in the PISA 2009 Main Survey (StQ15).Do NOT use the expressions 'ISCED 5A', 'ISCED 5B' etc. as the respondent will not understand them.

Q<18>: Notes for Test Administrator

This question is asking about completion; that is, obtaining a qualification. Just attending an institution where these qualifications can be obtained is not enough.

If a student's father (or equivalent male guardian) is deceased, then his qualifications can still be provided – but if this is unknown the question should be left blank.

If a student has a father (or equivalent male guardian) who was trained in a non-university setting but currently has an occupation requiring university education for admission (common examples are teaching, nursing, and some accounting occupations) he or she may use response category b).

If the student's father obtained his qualifications abroad, please help the student to choose the response from the list that is closest. Asking questions like "Did he go to university?" should help clarify.

ST19Q01

ST19

Q What is your father currently doing?

(Please tick only one box.)

Working full-time <for pay> ☐ 1

Working part-time <for pay> ☐ 2

Not working, but looking for a job ☐ 3

Other (e.g. home duties, retired) ☐ 4

Notes for National Project Manager:

This question has been retained from the PISA 2009 Main Survey (StQ16).

This item provides information on the father of the student's current employment status; as well as additional information on social background.

Adaptations to this question are a requirement. They need to be described in the Questionnaire Adaptation Spreadsheet and agreed between the NPM and the Consortium.

Notes for Translator:

This question was worded identically in the PISA 2009 Main Survey (StQ16).

Q<19>: Notes for Test Administrator:

Students should answer this question with regard to their father's main occupation. If e.g. the father is working part-time but also doing home duties, students should tick b) 'working part-time'.

If a student has no father (or equivalent male guardian), then he or she should leave this question blank.

Please note that students should tick only one box.

ST20Q01-ST20Q03

ST20

Q In what country were you and your parents born?

(Please tick one box in each column.)

	You	*Mother*	*Father*
<Country A>	☐ 01	☐ 01	☐ 01
<Country B>	☐ 02	☐ 02	☐ 02
<Country C>	☐ 03	☐ 03	☐ 03
<Country D>	☐ 04	☐ 04	☐ 04
<…etc.>	☐ <xx>	☐ <xx>	☐ <xx>
Other country	☐ <xx>	☐ <xx>	☐ <xx>

Notes for National Project Manager:

This question has been retained from the PISA 2009 Main Survey (StQ17). These three variables provide information on immigrant background.

In order to adapt this question you must first complete the **Country Table** procedures detailed in the Data Management manual. After completing your Country Table you will have a list of countries (and possibly regions) that will be used to adapt this question.

The data entry subscripts should match the codes in the KEY column of demographics task 3.

Usually **<Country A>** will be the country of the test. The final variable will usually be 'Other country'.

Adaptations to this question are a requirement. They need to be described in the Questionnaire Adaptation Spreadsheet and agreed between the NPM and the Consortium.

Notes for Translator:

This question was worded identically in the PISA 2009 Main Survey (StQ17).

ST21Q01

Q **If <u>you</u> were NOT born in <country of test>, how old were you when you arrived in <country of test>?**

If you were less than 12 months old, please write zero (0).

If you are born in <country of test> please skip this question and go to Q<22>.

_____ *Years*

<u>Notes for National Project Manager:</u>

This question has been retained from the PISA 2009 Main Survey (StQ18).

This item provides information on immigrant background.

Students not born in the country of the test are asked how old they were when they arrived in the country. This provides information about the time spent in the country and in its educational system.

Stem: **<country of test>** - refers to the country being tested.

Adaptations to this question are a requirement. They need to be described in the Questionnaire Adaptation Spreadsheet and agreed between the NPM and the Consortium.

<u>Notes for Translator:</u>

This question was worded identically in the PISA 2009 Main Survey (StQ18).

<u>Q<21>: Notes for Test Administrator:</u>

Age – students should give their age in full years (and ignore months) at the time that they arrived in the country. If the student is born in <country of test>, student should skip this question and go to question ST22.

ST22Q01

ST22

Q Was your mother born in <country of test>?

(Please tick only one box.)

No ☐ 1

Yes ☐ 2

If YES please go to Q26.

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial and it provides information on immigrant background.

Stem: **<country of test>** - refers to the country being tested.

Adaptations to this question are a requirement. They need to be described in the Questionnaire Adaptation Spreadsheet and agreed between the NPM and the Consortium.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST23Q01-ST23Q08

ST23

Q

Below you will find statements about <host culture> and <heritage culture>. <Host culture> refers to the culture and country in which you now live. <Heritage culture> refers to the culture and country in which your mother was born.

To what extent do you agree with the following statements?

(Please tick only one box in each row.)

	Strongly agree	*Agree*	*Disagree*	*Strongly disagree*
a) I like to have <host culture> friends.	☐ 1	☐ 2	☐ 3	☐ 4
b) I like to have <heritage culture> friends.	☐ 1	☐ 2	☐ 3	☐ 4
c) I like to participate in <host culture> celebrations.	☐ 1	☐ 2	☐ 3	☐ 4
d) I like to participate in <heritage culture> celebrations.	☐ 1	☐ 2	☐ 3	☐ 4
e) I spend much time with <host culture> friends.	☐ 1	☐ 2	☐ 3	☐ 4
f) I spend much time with <heritage culture> friends.	☐ 1	☐ 2	☐ 3	☐ 4
g) I participate in <host culture> celebrations.	☐ 1	☐ 2	☐ 3	☐ 4
h) I participate in <heritage culture> celebrations.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

Stem and items: **<Host culture>** should involve the term in the country used by the target group to refer to the majority country or culture, such as “the mainstream culture”, “the German culture” or simply “Germany”.

Stem and items: **<Heritage culture>** should involve the term used by the target group to refer to the heritage country or culture, such as ‘the country of my mother’.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST24Q01-ST24Q03

ST24

Q The statements below are about differences between <host culture> and <heritage culture>.

To what extent do you agree with the following statements?

(Please tick only one box in each row.)

	Strongly agree	*Agree*	*Disagree*	*Strongly disagree*
a) The values of people in the <host culture> and in the <heritage culture> are the same.	☐ 1	☐ 2	☐ 3	☐ 4
b) Mothers in the <host culture> and in the <heritage culture> treat their children in the same way.	☐ 1	☐ 2	☐ 3	☐ 4
c) Pupils from the <host culture> and the <heritage culture> deal with their teachers in the same way.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

Stem and items: **<Host culture>** should involve the term in the country used by the target group to refer to the majority country or culture, such as 'the mainstream culture', 'the German culture' or simply 'Germany'.

Stem and items: **<Heritage culture>** should involve the term used by the target group to refer to the heritage country or culture, such as 'the country of my mother'.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST25Q01

ST25

Q What language do you speak at home most of the time?

(Please tick only one box.)

<Language 1> ☐ <xxx>

<Language 2> ☐ <xxx>

<Language 3> ☐ <xxx>

< …etc. > ☐ <xxx>

Other language ☐ <xxx>

Notes for National Project Manager:

This question has been retained from the PISA 2009 Main Survey (StQ19). This variable provides information on immigrant background and language use.

Refer to the Language Table procedures detailed in the Data Management manual.

<Language 1>, <Language 2> etc., should match the languages listed in your country's Language Table.

Subscripts should match the three digit codes in your country's Language Table.

Adaptations to this question are a requirement. They need to be described in the Questionnaire Adaptation Spreadsheet and agreed between the NPM and the Consortium.

Notes for Translator:

This question was worded identically in the PISA 2009 Main Survey (StQ19).

Q<25>: Notes for Test Administrator:

This question asks for the language the student speaks at home most of the time. Students should not answer with regard to any other languages that are also spoken or understood at home.

ST26Q01-ST26Q17

ST26

Q Which of the following are in your home?

(Please tick one box in each row.)

	Yes	*No*
a) A desk to study at	☐ 1	☐ 2
b) A room of your own	☐ 1	☐ 2
c) A quiet place to study	☐ 1	☐ 2
d) A computer you can use for school work	☐ 1	☐ 2
e) Educational software	☐ 1	☐ 2
f) A link to the Internet	☐ 1	☐ 2
g) Classic literature (e.g. <Shakespeare>)	☐ 1	☐ 2
h) Books of poetry	☐ 1	☐ 2
i) Works of art (e.g. paintings)	☐ 1	☐ 2
j) Books to help with your school work	☐ 1	☐ 2
k) <Technical reference books>	☐ 1	☐ 2
l) A dictionary	☐ 1	☐ 2
m) A dishwasher	☐ 1	☐ 2
n) A <DVD> player	☐ 1	☐ 2
o) <Country-specific wealth item 1>	☐ 1	☐ 2
p) <Country-specific wealth item 2>	☐ 1	☐ 2
q) <Country-specific wealth item 3>	☐ 1	☐ 2

Notes for National Project Manager:

This question has been retained from the PISA 2009 Main Survey (StQ20). This set of variables provides information on home background and contributes to an index of economic, social and cultural status.

Item g): **<Shakespeare>** needs to be substituted by a relevant classical author in the country's language.

Item k): **<Technical reference books>** - these may be books that contain instructions how to operate computer programmes or systems, or books that contain operating instructions or maintenance instructions for devices or machines found at the home.

Item n): **<DVD>** player: (Digital Video Disc) use terms common in your country. Please bear in mind to use a term especially referring to a <DVD> player.

Item p) q) & r): **<Country-specific item>**: NPMs must add other indicators of **wealth** as suits the national context. Please review your item statistics from previous PISA Main Studies. Between 20 and 80 percent of students in <country> should be expected to report having these items at home.

NPMs may opt for wealth indictors that are not household items -that is, they are not goods found in the home. In this case, it will be necessary to create a new question stem for these indicators. For example, one may choose 'holiday home' as a nationally specific indicator of wealth. In this example the above question needs to be renamed Q20A and an appropriate question might be formulated as: 'Q20B: Do your parents own a holiday home?'

Adaptations to this question are a requirement. They need to be described in the Questionnaire Adaptation Spreadsheet and agreed between the NPM and the Consortium.

Notes for Translator:

This question was worded identically in the PISA 2009 Main Survey (StQ20).

Q<26>: Notes for Test Administrator:

Item e): Any computer software that may be used to help with studies for school.

ST27Q01-ST27Q05

ST27

Q **How many of these are there at your home?**

(Please tick only one box in each row.)

	None	*One*	*Two*	*Three or more*
a) Cellular phones	☐	☐	☐	☐ 4
b) Televisions	☐	☐	☐	☐ 4
c) Computers	☐	☐	☐	☐ 4
d) Cars	☐	☐	☐	☐ 4
e) Rooms with a bath or shower	☐	☐	☐	☐ 4

Notes for National Project Manager:

This question has been retained from the PISA 2009 Main Survey (StQ21). This set of variables provides information on home background and will contribute to an index of economic, social and cultural status.

The **data entry subscripts do not and should not appear** in the first three data entry boxes for each item in this question as they caused confusion among students in previous cycles. Data entry codes should proceed from 1 to 4 across each row. **Data entry staff will need to be advised of this aspect.**

Notes for Translator:

This question was worded identically in the PISA 2009 Main Survey (StQ21).

Note that data entry subscripts have been removed from this question (and should not appear except for column 4).

Q<27>: Notes for Test Administrator:

The ‘home’ should be the family home. If students spend time in more than one home, they should select the home where they spend most of their time. If they spend time equally in two homes, they should just select one. They should not sum the contents of both homes.

Students should include their own computer in the count of computers in the home.

ST28Q01

Q How many books are there in your home?

There are usually about 40 books per metre of shelving. Do not include magazines, newspapers, or your schoolbooks.

(Please tick only one box.)

0-10 books	☐ 1
11-25 books	☐ 2
26-100 books	☐ 3
101-200 books	☐ 4
201-500 books	☐ 5
More than 500 books	☐ 6

Notes for National Project Manager:

This question has been retained from the PISA 2009 Main Survey (StQ22).

This variable provides additional information on home background and the possibility of comparing PISA 2012 results on home background and performance with those from previous international studies.

Notes for Translator:

This question was worded identically in the PISA 2009 Main Survey (StQ22).

SECTION <C>: ABOUT LEARNING MATHEMATICS

ST29Q01-ST29Q08

ST29

Q **Thinking about your views on mathematics: To what extent do you agree with the following statements?**

(Please tick only one box in each row.)

		Strongly agree	*Agree*	*Disagree*	*Strongly disagree*
a)	I enjoy reading about mathematics.	☐ 1	☐ 2	☐ 3	☐ 4
b)	Making an effort in mathematics is worth it because it will help me in the work that I want to do later on.	☐ 1	☐ 2	☐ 3	☐ 4
c)	I look forward to my mathematics lessons.	☐ 1	☐ 2	☐ 3	☐ 4
d)	I do mathematics because I enjoy it.	☐ 1	☐ 2	☐ 3	☐ 4
e)	Learning mathematics is worthwhile for me because it will improve my career <prospects, chances>.	☐ 1	☐ 2	☐ 3	☐ 4
f)	I am interested in the things I learn in mathematics.	☐ 1	☐ 2	☐ 3	☐ 4
g)	Mathematics is an important subject for me because I need it for what I want to study later on.	☐ 1	☐ 2	☐ 3	☐ 4
h)	I will learn many things in mathematics that will help me get a job.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question has been reintroduced from the PISA 2003 Main Survey (StQ30). These items provide information on Motivation to Learn Mathematics. Two scales may be derived from these items: Interest and Enjoyment (a, c, d, and f) and Instrumental Motivation (b, e, g, and h).

Notes for Translator:

This question was worded identically in the PISA 2003 Main Survey (StQ30).

ST30Q01-ST30Q04

ST30

Q **Please read the paragraph below. Then indicate for each of the explanations that follow how likely it is to apply for you given the situation.**

You have been studying for a mathematics quiz and you are getting tired. Your friends want you to stop studying and go to a movie with them. Although you think it would be fun, you decide to continue studying for the quiz instead of going with them.

How likely are the following reasons for YOU doing this in the situation?

(Please tick only one box in each row.)

	Very likely	*Likely*	*Unlikely*	*Very unlikely*
a) I reason that studying hard for my mathematics quiz is worth it because it will help me in my future career.	☐ 1	☐ 2	☐ 3	☐ 4
b) I just think that studying mathematics is fun.	☐ 1	☐ 2	☐ 3	☐ 4
c) I will not go out because my parents expect me to do well on my mathematics quiz.	☐ 1	☐ 2	☐ 3	☐ 4
d) I reason that it is more important for to me to get better mathematics <grades> than to go out with my friends.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

Given that cross-cultural bias due to differences in scale use has been a problem in previous PISA cycles, items similar in style to situation judgment tests may bypass this problem by completely eliminating responses that are scale dependent. A situational judgment test is one in which participants are asked how best to, or how they might

typically deal with some situation. This and the following four questions are of this type, and will be examined in the Field Trial to determine whether they might be aggregated.

In the present case, item (a) is intended to reflect the individual's instrumental motivation, (b) measures intrinsic motivation, (c) parental pressure, and (d) competitiveness. Values may be computed for relative importance in the situation and across the situations described in questions ST30 to ST34.

Item d): **<grades>** This term refers to the teacher's standardized evaluation of student performance in a course or subject and should be adapted to the national context.

Adaptations to this question are a requirement. They need to be described in the Questionnaire Adaptation Spreadsheet and agreed between the NPM and the Consortium.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST31Q01-ST31Q04

ST31

Q **Please read the paragraph below. Then indicate for each of the explanations that follow how likely it is to apply for you given the situation.**

You have decided to read a book about the history of mathematics in your free time that was not assigned in school.

How likely are the following reasons for YOU doing this in the situation?

(Please tick only one box in each row.)

	Very likely	*Likely*	*Unlikely*	*Very unlikely*
a) Reading about the history of mathematics in my free time will help me get better <grades> than the other students in my class.	☐ 1	☐ 2	☐ 3	☐ 4
b) Reading about the history of mathematics in my free time will help me obtain the job I want.	☐ 1	☐ 2	☐ 3	☐ 4
c) Reading about the history of mathematics in my free time is enjoyable.	☐ 1	☐ 2	☐ 3	☐ 4
d) My parents want me to read about the history of mathematics as much as I can.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial and is another situational judgment type item. In the present case, item (a) is intended to reflect competitiveness, (b) instrumental motivation, (c) intrinsic motivation, and (d) parental pressure. Values may be computed for relative importance in the situation and across the situations described in ST30 to ST34.

Item a): **<grades>** This term refers to the teacher's standardized evaluation of student performance in a course or subject and should be adapted to the national context.

Adaptations to this question are a requirement. They need to be described in the Questionnaire Adaptation Spreadsheet and agreed between the NPM and the Consortium.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST32Q01-ST32Q04

ST32

Q **Please read the paragraph below. Then indicate for each of the explanations that follow how likely it is to apply for you given the situation.**

Your school has a mathematics club. In this club students compete to solve mathematics problems against other schools. You have decided to join the club.

How likely are the following reasons that you have done

(Please tick only one box in each row.)

	Very likely	*Likely*	*Unlikely*	*Very unlikely*
a) My parents encouraged me to enrol in the club.	☐ 1	☐ 2	☐ 3	☐ 4
b) I want to obtain the highest <grade> in all of my mathematics	☐ 1	☐ 2	☐ 3	☐ 4
c) I am interested in solving mathematics problems.	☐ 1	☐ 2	☐ 3	☐ 4
d) It will give me practice mastering the mathematics skills that I will need in my future career.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial and is another situational judgment type item. In the present case, item (a) is intended to reflect parental pressure, (b) competitiveness, (c) intrinsic motivation, and (d) instrumental motivation. Values may be computed for relative importance in the situation and across the situations described in ST30 to ST34.

Item b): **<grade>** This term refers to the teacher's standardized evaluation of student performance in a course or subject and should be adapted to the national context.

Adaptations to this question are a requirement. They need to be described in the Questionnaire Adaptation Spreadsheet and agreed between the NPM and the Consortium.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST33Q01-ST33Q04

ST33

Q **Please read the sentence below. Then indicate for each of the explanations that follow how likely it is to apply for you given the situation.**

You decide to pay closer attention in your mathematics class as opposed to your other classes.

How likely are the following reasons that you have done this?

(Please tick only one box in each row.)

	Very likely	*Likely*	*Unlikely*	*Very unlikely*
a) Paying attention in mathematics will be useful when I have a career.	☐ 1	☐ 2	☐ 3	☐ 4
b) Paying attention in mathematics will help me do better on exams than the other students in my class.	☐ 1	☐ 2	☐ 3	☐ 4
c) I pay attention in mathematics class because I enjoy it.	☐ 1	☐ 2	☐ 3	☐ 4
d) I pay attention in mathematics because my parents will be disappointed if I do not do well in mathematics.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial and is another situational judgment type item. In the present case, item a) is intended to reflect instrumental motivation, b) competitiveness, c) intrinsic motivation, and d) parental pressure. Values may be computed for relative importance in the situation and across the other situations described in ST30 to ST34.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST34Q01-ST34Q04

ST34

Q **Please read the paragraph below. Then indicate for each of the explanations that follow how likely it is to apply for you given the situation.**

You have 25 hours a week to study for your classes. You usually study 12 hours a week for your mathematics class, almost the same as the total time spent studying science, <test language>, foreign languages, and history combined.

How likely are the following reasons that you have done this?

(Please tick only one box in each row.)

	Very likely	*Likely*	*Unlikely*	*Very unlikely*
a) I study more for mathematics class because learning many things in mathematics will help me get a job.	☐ 1	☐ 2	☐ 3	☐ 4
b) I study more for mathematics class because I want to get higher <grades> than anyone else.	☐ 1	☐ 2	☐ 3	☐ 4
c) I study more for mathematics class because mathematics is fun.	☐ 1	☐ 2	☐ 3	☐ 4
d) I study more for mathematics class because my parents make me.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial and is another situational judgment type item. In the present case, item a) is intended to reflect instrumental motivation, b) competitiveness, c) intrinsic motivation, and d) parental pressure. Values may be computed for relative importance in the situation and across the situations described in ST30 to ST34.

Stem: **<test language>** This refers to the language of instruction in which the test is administered. In some countries <test language> may be taught in different school subjects, e.g. English language and English literature. If this is the case, <test language> should be adapted accordingly.

Item b): **<grades>** This term refers to the teacher's standardized evaluation of student performance in a course or subject and should be adapted to the national context.

Adaptations to this question are a requirement. They need to be described in the Questionnaire Adaptation Spreadsheet and agreed between the NPM and the Consortium.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST35Q01-ST35Q10

ST35

Q **Thinking about how people important to you view mathematics: How strongly do you agree with the following statements*?***

(Please tick only one box in each row.)

	Strongly agree	*Agree*	*Disagree*	*Strongly disagree*
a) Most of my friends do well in mathematics.	☐ 1	☐ 2	☐ 3	☐ 4
b) Most of my friends work hard on mathematics.	☐ 1	☐ 2	☐ 3	☐ 4
c) My friends enjoy taking mathematics tests.	☐ 1	☐ 2	☐ 3	☐ 4
d) My parents believe it's important for me to study mathematics.	☐ 1	☐ 2	☐ 3	☐ 4
e) My parents believe that mathematics is important for my career.	☐ 1	☐ 2	☐ 3	☐ 4
f) My parents like mathematics.	☐ 1	☐ 2	☐ 3	☐ 4
g) My teachers believe it is important for me to study mathematics.	☐ 1	☐ 2	☐ 3	☐ 4
h) My teachers think it is important for me to do well in mathematics.	☐ 1	☐ 2	☐ 3	☐ 4
i) The people in my life whose opinions I value are good at mathematics.	☐ 1	☐ 2	☐ 3	☐ 4
j) People whose opinions I value think that mathematics is an important subject.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

These items provide information on how teachers, peers, and parents influence a student's attitude towards mathematics; this is a new attitudinal variable that is set out in the PISA 2012 Context Questionnaire Framework (QEG(1010)1). Research has shown this variable can impact behaviour, including performance on mathematics tests.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST36Q01-ST36Q08

ST36

Q **Thinking about your friends: To what extent do you agree with the following statements?**

(Please tick only one box in each row.)

	Strongly agree	*Agree*	*Disagree*	*Strongly disagree*
a) My friends enjoy reading about mathematics.	☐ 1	☐ 2	☐ 3	☐ 4
b) My friends look forward to their mathematics lessons.	☐ 1	☐ 2	☐ 3	☐ 4
c) My friends do mathematics because they enjoy it.	☐ 1	☐ 2	☐ 3	☐ 4
d) My friends are interested in learning mathematics.	☐ 1	☐ 2	☐ 3	☐ 4
e) My friends think making an effort in mathematics is worth it because it will help them later on.	☐ 1	☐ 2	☐ 3	☐ 4
f) My friends think mathematics will help them with the subjects that they want to study further on in school.	☐ 1	☐ 2	☐ 3	☐ 4
g) My friends believe mathematics is an important subject for them to study.	☐ 1	☐ 2	☐ 3	☐ 4
h) My friends think that studying mathematics will help them get a job.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

Subjective norms can also be assessed by students answering the items from the perspective of people important to them. This alternative approach to measuring this new attitudinal variable (see Context Questionnaire Framework (QEG(1010)1))

may be less subject to response bias effects (e.g., social desirability).

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST37Q01-ST37Q08

ST37

Q How confident do you feel about having to do the following mathematics tasks?

(Please tick only one box in each row.)

	Very confident	*Confident*	*Not very confident*	*Not at all confident*
a) Using a <train timetable> to work out how long it would take to get from one place to another.	☐ 1	☐ 2	☐ 3	☐ 4
b) Calculating how much cheaper a TV would be after a 30% discount.	☐ 1	☐ 2	☐ 3	☐ 4
c) Calculating how many square metres of tiles you need to cover a floor.	☐ 1	☐ 2	☐ 3	☐ 4
d) Understanding graphs presented in Newspapers.	☐ 1	☐ 2	☐ 3	☐ 4
e) Solving an equation like 3x+5= 17.	☐ 1	☐ 2	☐ 3	☐ 4
f) Finding the actual distance between two places on a map with a 1:10,000 scale.	☐ 1	☐ 2	☐ 3	☐ 4
g) Solving an equation like 2(x+3) = (x + 3) (x - 3).	☐ 1	☐ 2	☐ 3	☐ 4
h) Calculating the petrol consumption rate of a car.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question has been reintroduced from the PISA 2003 Main Survey (StQ31).

This scale provides information on feelings of self-efficacy in Mathematics (single scale with eight items).

Item a): **<train timetable>**: This needs to be adapted to the national context. In countries without train systems, for example, this may be substituted by <bus timetable>.

Adaptations to this question are a requirement. They need to be described in the Questionnaire Adaptation Spreadsheet and agreed between the NPM and the Consortium.

Notes for Translator:

This question was worded identically in the PISA 2003 Main Survey (StQ31).

ST38Q01-ST38Q06

ST38

Q **If you had to choose between the following options which would you prefer?**

(Please show how close your opinion is to the statements below by ticking one of the boxes numbered 1 and 7 in each row.)

a)	I am interested in mathematics lessons more than in any other lessons.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	I am interested in mathematics lessons less than in any other lessons.
b)	I would be happy to drop mathematics if I could.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	I would be sad to drop mathematics if I had to.
c)	I enjoy reading about mathematics.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	I avoid reading about mathematics.
d)	I plan to do as much mathematics as possible during my education.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	I plan to do as little mathematics as possible during my education.
e)	I avoid doing mathematics problems and puzzles outside mathematics lessons.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	I enjoy doing mathematics problems and puzzles outside mathematics lessons.
f)	I look forward to my mathematics lessons.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	I do not look forward to my mathematics lessons.

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

Note that one explanation for the finding that the sign of the relationship of mathematics attitudes to achievement reverses from within- to between-country comparisons is that these items are subject to cross-cultural response bias in scale-use. One way to address the matter is to develop attitudinal measures of these particular constructs that are less prone to cross-cultural bias.

This set of items forces students to locate themselves between two choices with respect to Interest and Enjoyment in Mathematics. Later in the questionnaire, one set of items is repeated with a different response scale to enable the calculation of a response method effect.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST39Q01-ST39Q06

Q **To what extent do you agree with the following statements?**

(Please tick only one box in each row.)

	Strongly agree			*Neither agree nor disagree*			*Strongly disagree*
a) I am interested in mathematics lessons more than in any other lessons.	☐ 01	☐ 02	☐ 03	☐ 04	☐ 05	☐ 06	☐ 07
b) I would be happy to drop mathematics if I could.	☐ 01	☐ 02	☐ 03	☐ 04	☐ 05	☐ 06	☐ 07
c) I enjoy reading about mathematics.	☐ 01	☐ 02	☐ 03	☐ 04	☐ 05	☐ 06	☐ 07
d) I plan to do as much mathematics as possible during my education.	☐ 01	☐ 02	☐ 03	☐ 04	☐ 05	☐ 06	☐ 07
e) I avoid doing mathematics problems and puzzles outside mathematics lessons.	☐ 01	☐ 02	☐ 03	☐ 04	☐ 05	☐ 06	☐ 07
f) I look forward to my mathematics lessons.	☐ 01	☐ 02	☐ 03	☐ 04	☐ 05	☐ 06	☐ 07

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

Note that one explanation for the finding that the sign of the relationship of mathematics attitudes to achievement reverses from within- to between-country comparisons is that these items are subject to cross-cultural response bias in scale-use. One way to address the matter is to develop attitudinal measures of these particular constructs that are less prone to cross-cultural bias.

This set of items is intentionally repeated with a different response scale to enable the calculation of a response method effect.

Notes for Translator:

This question is new in the PISA 2012 Field Trial. The items are taken from question ST38 (items to the left of the response boxes) and should not be newly translated here. The response scale, however, is different to ST38.

ST40Q01-ST40Q06

Q To what extent do you agree with the following statements?

(Please tick only one box in each row.)

	Strongly agree			*Neither agree nor disagree*			*Strongly disagree*
a) I am interested in mathematics lessons less than in any other lessons.	☐ 01	☐ 02	☐ 03	☐ 04	☐ 05	☐ 06	☐ 07
b) I would be sad to drop mathematics if I had to.	☐ 01	☐ 02	☐ 03	☐ 04	☐ 05	☐ 06	☐ 07
c) I avoid reading about mathematics.	☐ 01	☐ 02	☐ 03	☐ 04	☐ 05	☐ 06	☐ 07
d) I plan to do as little mathematics as possible during my education.	☐ 01	☐ 02	☐ 03	☐ 04	☐ 05	☐ 06	☐ 07
e) I enjoy doing mathematics problems and puzzles outside mathematics lessons.	☐ 01	☐ 02	☐ 03	☐ 04	☐ 05	☐ 06	☐ 07
f) I do not look forward to my mathematics lessons.	☐ 01	☐ 02	☐ 03	☐ 04	☐ 05	☐ 06	☐ 07

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

Note that one explanation for the finding that the sign of the relationship of mathematics attitudes to achievement reverses from within- to between-country comparisons is that these items are subject to cross-cultural response bias in scale-use. One way to address the matter is to develop attitudinal measures of these particular constructs that are less prone to cross-cultural bias.

This set of items is intentionally repeated with a different response scale to enable the calculation of a response method effect.

Notes for Translator:

This question is new in the PISA 2012 Field Trial. The items are taken from ST38 (items on the right of the response boxes) and should not be newly translated here. The response scale, however, is different to ST38.

ST41Q01-ST41Q06

ST41

Q **Here we briefly describe some students. Please read each description and tick the box on each line that shows how much each student is like you.**

(Please tick only one box in each row.)

	Very much like me	*Like me*	*Some-what like me*	*A little like me*	*Not like me*	*Not like me at all*
a) This student is interested in mathematics lessons more than in any other lessons.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6
b) This student would be happy to drop mathematics if he or she could.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6
c) This student enjoys reading about mathematics.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6
d) This student plans to do as much mathematics as possible during his or her education.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6
e) This student avoids doing mathematics problems and puzzles outside mathematics lessons.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6
f) This student looks forward to his or her mathematics lessons.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

Note that one explanation for the finding that the sign of the relationship of mathematics attitudes to achievement reverses from within- to between-country comparisons is that these items are subject to cross-cultural response bias in scale-use. One way to address the matter is to develop attitudinal measures of these particular constructs that are less prone to cross-cultural bias.

This set of items is intentionally repeated with a different response scale to enable the calculation of a response method effect.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST42Q01-ST42Q10

ST42

Q **Thinking about studying mathematics: To what extent do you agree with the following statements?**

(Please tick only one box in each row.)

	Strongly agree	*Agree*	*Disagree*	*Strongly disagree*
a) I often worry that it will be difficult for me in mathematics classes.	☐ 1	☐ 2	☐ 3	☐ 4
b) I am just not good at mathematics.	☐ 1	☐ 2	☐ 3	☐ 4
c) I get very tense when I have to do mathematics homework.	☐ 1	☐ 2	☐ 3	☐ 4
d) I get good <grades> in mathematics.	☐ 1	☐ 2	☐ 3	☐ 4
e) I get very nervous doing mathematics problems.	☐ 1	☐ 2	☐ 3	☐ 4
f) I learn mathematics quickly.	☐ 1	☐ 2	☐ 3	☐ 4
g) I have always believed that mathematics is one of my best subjects.	☐ 1	☐ 2	☐ 3	☐ 4
h) I feel helpless when doing a mathematics problem.	☐ 1	☐ 2	☐ 3	☐ 4
i) In my mathematics class, I understand even the most difficult work.	☐ 1	☐ 2	☐ 3	☐ 4
j) I worry that I will get poor <grades> in mathematics.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question has been reintroduced from the PISA 2003 Main Survey (StQ32).

These items provide information on self-related cognitions regarding Mathematics. There are two sub-scales that can be created from these items: Mathematics Anxiety (a, c, e, h, and j) and Mathematics Self-Concept (b, d, f, g, and i).

Items d & j): **<grades>** This term refers to the teacher's standardized evaluation of student performance in a course or subject and should be adapted to the national context.

Adaptations to this question are a requirement. They need to be described in the Questionnaire Adaptation Spreadsheet and agreed between the NPM and the Consortium.

Notes for Translator:

This question was worded identically in the PISA 2003 Main Survey (StQ32).

ST43Q01-ST43Q06

ST43

Q **Thinking about your mathematics lessons: To what extent do you agree with the following statements?**

(Please tick only one box in each row.)

		Strongly agree	*Agree*	*Disagree*	*Strongly disagree*
a)	If I invest enough effort I can succeed in mathematics.	☐ 1	☐ 2	☐ 3	☐ 4
b)	Whether or not I do well in mathematics is completely up to me.	☐ 1	☐ 2	☐ 3	☐ 4
c)	Family demands or other problems prevent me from putting a lot of time into my mathematics work.	☐ 1	☐ 2	☐ 3	☐ 4
d)	If I had different teachers, I would try harder in mathematics.	☐ 1	☐ 2	☐ 3	☐ 4
e)	If I wanted to I could perform well in mathematics.	☐ 1	☐ 2	☐ 3	☐ 4
f)	I perform poorly in mathematics whether or not I study for my exams.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

These items measure perceived control toward putting forth effort into mathematics. Perceived control represents the extent to which performing a behaviour is under one's control. Research has demonstrated that perceived control predicts intentions which then predict behaviours.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST44Q01-ST44Q08

ST44

Q **You are a student in the following situation:**

Each week, the teacher of your mathematics course gives a short quiz. Recently you performed poorly on these quizzes. Today you are trying to figure out why.

How likely are you to have these thoughts or feelings in this situation?

(Please tick only one box in each row.)

	Very likely	*Likely*	*Slightly likely*	*Not at all likely*
a) I'm not very good at solving mathematics problems.	☐ 1	☐ 2	☐ 3	☐ 4
b) I did not make a special effort to study this material in the mathematics textbook.	☐ 1	☐ 2	☐ 3	☐ 4
c) My teacher did not explain the concepts well this week.	☐ 1	☐ 2	☐ 3	☐ 4
d) This week I made bad guesses on the quiz.	☐ 1	☐ 2	☐ 3	☐ 4
e) Sometimes the course material is too hard.	☐ 1	☐ 2	☐ 3	☐ 4
f) I have not been studying enough lately.	☐ 1	☐ 2	☐ 3	☐ 4
g) The teacher did not get students interested in the material.	☐ 1	☐ 2	☐ 3	☐ 4
h) Sometimes I am just unlucky.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

These items provide information on attributions of effort. Some research suggests that attributions to controllable factors, such as effort, predict academic achievement better than do attributions to uncontrollable factors, such

as others' behaviour. The items here represent attributions for negative events.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST45Q01-ST45Q08

ST45

Q **You are a student in the following situation:**

Last week you were having difficulty understanding a new concept presented by the mathematics teacher. This week, however, you are beginning to catch on. Today you are trying to figure out why.

How likely are you to have these thoughts or feelings in this situation?

(Please tick only one box in each row.)

	Very Likely	*Likely*	*Slightly likely*	*Not at all likely*
a) I am very good at solving mathematics problems.	☐ 1	☐ 2	☐ 3	☐ 4
b) I made a special effort to study this material in the mathematics textbook.	☐ 1	☐ 2	☐ 3	☐ 4
c) The teacher explained it well this time.	☐ 1	☐ 2	☐ 3	☐ 4
d) This week I made good guesses.	☐ 1	☐ 2	☐ 3	☐ 4
e) I realized the course material was easy after all.	☐ 1	☐ 2	☐ 3	☐ 4
f) I actually studied enough during the past week.	☐ 1	☐ 2	☐ 3	☐ 4
g) The teacher got me interested in the material.	☐ 1	☐ 2	☐ 3	☐ 4

h) Sometimes I am lucky. ☐1 ☐2 ☐3 ☐4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

These items provide information on attributions of effort. Some research suggests that attributions to controllable factors, such as effort, predict academic achievement better than do attributions to uncontrollable factors, such as others' behaviour. The items here represent attributions for positive events.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST46Q01-ST46Q09

ST46

Q Thinking about the mathematics you do for school: To what extent do you agree with the following statements?

(Please tick only one box in each row.)

	Strongly agree	*Agree*	*Disagree*	*Strongly disagree*
a) I have my homework complete in time for mathematics class.	☐ 1	☐ 2	☐ 3	☐ 4
b) I work hard on my mathematics homework.	☐ 1	☐ 2	☐ 3	☐ 4
c) I am prepared for my mathematics exams.	☐ 1	☐ 2	☐ 3	☐ 4
d) I study hard for mathematics quizzes.	☐ 1	☐ 2	☐ 3	☐ 4
e) I keep studying until I understand mathematics material.	☐ 1	☐ 2	☐ 3	☐ 4
f) I pay attention in mathematics class.	☐ 1	☐ 2	☐ 3	☐ 4
g) I listen in mathematics class.	☐ 1	☐ 2	☐ 3	☐ 4
h) I avoid distractions when I am studying mathematics.	☐ 1	☐ 2	☐ 3	☐ 4
i) I keep my mathematics work well organized.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

These items measure tendency to put effort into one's work. These items were adapted from existing measures of conscientiousness. Put in another way, this proposed measure will be an assessment of students' conscientiousness toward mathematics related tasks. Conscientiousness is a personality trait characterized by work ethic and organization. Meta-analysis has demonstrated

that conscientiousness predicts academic achievement at every academic level.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST47Q01-ST47Q10

ST47

Q **Thinking about your views on mathematics: To what extent do you agree with the following statements?**

(Please tick only one box in each row.)

	Strongly agree	*Agree*	*Disagree*	*Strongly disagree*
a) I plan on studying hard in mathematics.	☐ 1	☐ 2	☐ 3	☐ 4
b) I intend to seek external help to improve my mathematics skills.	☐ 1	☐ 2	☐ 3	☐ 4
c) I intend to get the best possible <score> on all of my mathematics exams.	☐ 1	☐ 2	☐ 3	☐ 4
d) I plan to do all I can to get good <grades> in mathematics.	☐ 1	☐ 2	☐ 3	☐ 4
e) I intend to become better than my friends at mathematics.	☐ 1	☐ 2	☐ 3	☐ 4
f) I intend to <take> additional mathematics courses.	☐ 1	☐ 2	☐ 3	☐ 4
g) I plan on practicing mathematics problems each night on my own.	☐ 1	☐ 2	☐ 3	☐ 4
h) I am willing to do more work in my mathematics classes than is required.	☐ 1	☐ 2	☐ 3	☐ 4
i) I plan on <taking> as many mathematics classes as I can during my education.	☐ 1	☐ 2	☐ 3	☐ 4
j) I am planning on pursuing a career that involves mathematics.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

These items measure student intentions. Items a) to e): These items measure the intention to put forth effort in mathematics activities.

Item c): **<score>** This term refers to the <grade> or <mark> on a mathematics exam or test and should be adapted to the national context.

Item d): **<grades>** This term refers to the teacher's standardized evaluation of student performance in a course or subject and should be adapted to the national context.

Items f) to j): These items measure the intention to engage in Mathematics activities.

Research has demonstrated that intentions are the best predictor of behaviour.

Item f & i): **<take/ing>** This term refers to students who have the option of selecting additional elective courses in school. For countries with a mandatory curriculum that does not allow any choices or options, this item should be adapted to the national context.

Adaptations to this question are a requirement. They need to be described in the Questionnaire Adaptation Spreadsheet and agreed between the NPM and the Consortium.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST48Q01-ST48Q05

Q **For each pair of statements, please choose the item that best describes you.**

(Please tick only one box in each row.)

a)	I intend to take additional mathematics courses after school finishes.	☐ 1	I intend to take additional <test language> courses after school finishes.	☐ 2
b)	I plan on majoring in a subject in <college> that requires mathematics skills.	☐ 1	I plan on majoring in a subject in <college> that requires science skills.	☐ 2
c)	I am willing to study harder in my mathematics classes than is required.	☐ 1	I am willing to study harder in my <test language> classes than is required.	☐ 2
d)	I plan on <taking> as many mathematics classes as I can during my education.	☐ 1	I plan on <taking> as many science classes as I can during my education.	☐ 2
e)	I am planning on pursuing a career that involves a lot of mathematics.	☐ 1	I am planning on pursuing a career that involves a lot of science.	☐ 2

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

These items measure the intention to engage in mathematics activities and the intention to put forth effort in mathematics activities, with a modification to correct for faking and other response biases. This modification is the forced-choice technique, where students choose between one of two intention items that are matched in terms of their social desirability. In this case, students must choose between intentions to engage in either mathematics-related or science-related activities, both of which represent socially desirable choices.

Item a) & c): **<test language>** This refers to the language of instruction in which the PISA reading assessment is administered. In some countries <test language> may be taught in different school subjects, e.g. English language and English literature. If this is the case, <test language> has been adapted accordingly.

Item b), d) & e): ‘science’ - This term refers only to the core science subjects of physics, chemistry, Earth science and biology either taught in the country’s curriculum as separate science subjects, or taught within a single ’integrated- science’ subject. The term does not include related subjects such as engineering, technology, mathematics, psychology, economics, nor possible Earth science topics included in geography courses. In many countries this term has been adapted to the national context.

Item b): **<college>** This term refers to university level or tertiary education and should be adapted to the national context.

Item d): **<take>** This term refers to students who have the option of selecting additional elective courses in school. For countries with a mandatory curriculum that does not allow any choices or options, this item should be adapted to the national context.

Adaptations to this question are a requirement. They need to be described in the Questionnaire Adaptation Spreadsheet and agreed between the NPM and the Consortium.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

Q<48>: Notes for Test Administrator:

For these questions it is possible that some students will wish to suggest that there is no option suitable for them (or that both options are suitable). It is recommended that you stress that the student make a choice among the best alternative possible.

ST49Q01-ST49Q09

Q How often do you perform the following behaviours inside and outside of school hours?

(Please tick only one box in each row.)

	Always or almost always	*Often*	*Sometimes*	*Never or rarely*
a) I talk about mathematics problems with my friends.	☐ 1	☐ 2	☐ 3	☐ 4
b) I help my friends with mathematics.	☐ 1	☐ 2	☐ 3	☐ 4
c) I do mathematics as an <extracurricular> activity.	☐ 1	☐ 2	☐ 3	☐ 4
d) I take part in mathematics competitions.	☐ 1	☐ 2	☐ 3	☐ 4
e) I do mathematics more than 2 hours a day outside of school.	☐ 1	☐ 2	☐ 3	☐ 4
f) I play chess.	☐ 1	☐ 2	☐ 3	☐ 4
g) I program computers.	☐ 1	☐ 2	☐ 3	☐ 4
h) I do mathematics even though I do not like it.	☐ 1	☐ 2	☐ 3	☐ 4
i) I participate in a mathematics club.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

These items measure student mathematics behaviours. In theory, students who often engage in these behaviours should demonstrate high mathematics achievement.

Item c): **<extracurricular>:** Activities performed by students that fall outside the realm of the normal curriculum of school education.

Notes for Translator:

This question is new in the PISA 2012 Field Trial

ST50Q01-ST50Q10

ST50

Q Thinking about your mathematics classes: To what extent do you agree with the following statements?

(Please tick only one box in each row.)

	Strongly agree	*Agree*	*Disagree*	*Strongly disagree*
a) I would like to be the best in my class in mathematics.	☐ 1	☐ 2	☐ 3	☐ 4
b) In mathematics I enjoy working with other students in groups.	☐ 1	☐ 2	☐ 3	☐ 4
c) I try very hard in mathematics because I want to do better in the exams than the others.	☐ 1	☐ 2	☐ 3	☐ 4
d) When we work on a project in mathematics, I think that it is a good idea to combine the ideas of all the students in a group.	☐ 1	☐ 2	☐ 3	☐ 4
e) I make a real effort in mathematics because I want to be one of the best.	☐ 1	☐ 2	☐ 3	☐ 4
f) I do my best work in mathematics when I work with other students.	☐ 1	☐ 2	☐ 3	☐ 4
g) In mathematics I always try to do better than the other students in my	☐ 1	☐ 2	☐ 3	☐ 4
h) In mathematics, I enjoy helping others to work well in a group.	☐ 1	☐ 2	☐ 3	☐ 4
i) In mathematics I learn most when I work with other students in my class.	☐ 1	☐ 2	☐ 3	☐ 4
j) I do my best work in mathematics when I try to do better than others.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Managers:

This question has been reintroduced from the PISA 2003 Main Survey (StQ37).

This set of items provides information on Preferences for Learning Situations in Mathematics. Two scales Competitive Learning (a, c, e, g, and j) and Cooperative Learning (b, d, f, h, and i) can be derived from these items. Competitive learning refers to the preference to perform better than other students in maths, whereas cooperative learning refers to the preference to work on maths problems with others.

Notes for Translator:

This question was worded identically in the PISA 2003 Main Survey (StQ37).

ST51Q01-ST51Q05

ST51

Q **For each pair of items, please choose the one that best describes you.**

(Please tick only one box in each row.)

a)	I do my best work in mathematics when I try to do better than others.	☐ 1	I do my best work in mathematics when I work with other students.	☐ 2
b)	I would like to be the best in my class in mathematics.	☐ 1	In mathematics I enjoy working with other students in groups.	☐ 2
c)	When we work on a project in mathematics, I think that it is a good idea to combine the ideas of all the students in a group.	☐ 1	I try very hard in mathematics because I want to do better in the exams than the others.	☐ 2
d)	In mathematics, I enjoy helping others to work well in a group.	☐ 1	I make a real effort in mathematics because I want to be one of the best.	☐ 2
e)	In mathematics I always try to do better than the other students in my class.	☐ 1	In mathematics I learn most when I work with other students in my class.	☐ 2

Notes for National Project Managers:

This question has been retained, but modified, from the PISA 2003 Main Survey (StQ37).

These items measure competitive and cooperative learning, with a modification to correct for faking and other response biases. This modification is the forced-choice technique, where students choose between one of two intention items that are matched in terms of their social desirability. In this case, students must choose between competitive and cooperative learning strategies, each of which represents an advantageous or desirable choice.

The Competitive Mathematics Learning Strategies construct is represented in items a - option 1, b – option 1, c – option 2, d - option 2 and e – option 1. The Cooperative Mathematics Learning Strategies construct is represented in items a – option 2, b – option 2, c – option 1, d – option 1 and e – option 2.

Notes for Translator:

This question is worded similarly to that in the PISA 2003 Main Survey (StQ37). The items are identical however the stem has changed as well as the response format.

Q<51>: Notes for Test Administrator

For these questions it is possible that some students will wish to suggest that there is no option suitable for them (or that both options are suitable). It is recommended that you stress that the student make a choice among the best alternatives possible.

ST52Q01-ST52Q14

ST52

Q There are different ways of studying mathematics: To what extent do you agree with the following statements?

(Please tick only one box in each row.)

	Strongly agree	*Agree*	*Disagree*	*Strongly disagree*
a) When I study for a mathematics test, I try to work out what are the most important parts to learn.	☐ 1	☐ 2	☐ 3	☐ 4
b) When I am solving mathematics problems, I often think of new ways to get the answer.	☐ 1	☐ 2	☐ 3	☐ 4
c) When I study mathematics, I make myself check to see if I remember the work I have already done.	☐ 1	☐ 2	☐ 3	☐ 4
d) When I study mathematics, I try to figure out which concepts I still have not understood properly.	☐ 1	☐ 2	☐ 3	☐ 4
e) I think how the mathematics I have learnt can be used in everyday life.	☐ 1	☐ 2	☐ 3	☐ 4
f) I go over some problems in mathematics so often that I feel as if I could solve them in my sleep.	☐ 1	☐ 2	☐ 3	☐ 4
g) When I study for mathematics, I learn as much as I can off by heart.	☐ 1	☐ 2	☐ 3	☐ 4
h) I try to understand new concepts in mathematics by relating them to things I already know.	☐ 1	☐ 2	☐ 3	☐ 4
i) In order to remember the method for solving a mathematics problem, I go through examples again and again.	☐ 1	☐ 2	☐ 3	☐ 4
j) When I cannot understand something in mathematics, I always search for more information to clarify the problem.	☐ 1	☐ 2	☐ 3	☐ 4

	Strongly agree	*Agree*	*Disagree*	*Strongly disagree*
k) When I am solving a mathematics problem, I often think about how the solution might be applied to other interesting questions.	☐ 1	☐ 2	☐ 3	☐ 4
l) When I study mathematics, I start by working out exactly what I need to learn.	☐ 1	☐ 2	☐ 3	☐ 4
m) To learn mathematics, I try to remember every step in a procedure.	☐ 1	☐ 2	☐ 3	☐ 4
n) When learning mathematics, I try to relate the work to things I have learnt in other subjects.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Managers:

This question has been reintroduced from the PISA 2003 Main Survey (StQ34).

These variables assess a variety of Control, Elaboration, and Memorisation Strategies. Three sub-scales are possible to derive: (1) Control Strategy (from summing items a), d), j), and l)); (2) Elaboration Strategy (from summing items b), e), h), k), and n)); and (3) Memorisation Strategy (from summing items c), f), g), i), and m)).

Notes for Translator:

This question was worded identically in the PISA 2003 Main Survey (StQ34).

ST53Q01-ST53Q04

Q **For each group of three items, please choose the item that best describes your approach to mathematics.**

(Please tick only one box in each row.)

a)	When I study for a mathematics test, I try to work out what are the most important parts to learn.	☐ 1	When I study for a mathematics test, I try to understand new concepts by relating them to things I already know.	☐ 2	When I study for a mathematics test, I learn as much as I can off by heart.	☐ 3
b)	When I study mathematics, I try to figure out which concepts I still have not understood properly.	☐ 1	When I study mathematics, I think of new ways to get the answer.	☐ 2	When I study mathematics, I make myself check to see if I remember the work I have already done.	☐ 3
c)	When I study mathematics, I try to relate the work to things I have learnt in other subjects.	☐ 1	When I study mathematics, I start by working out exactly what I need to learn.	☐ 2	When I study mathematics, I go over some problems so often that I feel as if I could solve them in my sleep.	☐ 3
d)	In order to remember the method for solving a mathematics problem, I go through examples again and again.	☐ 1	I think how the mathematics I have learnt can be used in everyday life.	☐ 2	When I cannot understand something in mathematics, I always search for more information to clarify the problem.	☐ 3

Notes for National Project Managers:

This question has been retained, but modified, from the PISA 2003 Main Survey (StQ34).

These variables assess a variety of Control, Elaboration, and Memorisation Strategies, with a modification to correct for faking and other response biases. This modification is the forced-choice technique, where students choose between one of three items that are matched in terms of their social desirability. In this case, students must choose between Control (i.e. a - option 1, b – option 1, c – option 2, and d – option 3) Elaboration (i.e. a - option 2, b – option 2, c – option 1, and d – option 2) and Memorisation (i.e. a - option 3, b – option 3, c – option 3, and d – option 1) Strategies, each of which represents a desirable choice.

Notes for Translator:

There are some similarities to wording in the PISA 2003 Main Survey (StQ34). However, slight changes have been made to almost all of the items in this format.

ST54Q01-ST54Q09

ST54

Q **Thinking about your views on mathematics: To what extent do you agree with the following statements?**

(Please tick only one box in each row.)

	Strongly agree	*Agree*	*Disagree*	*Strongly disagree*
a) I try to use test-taking strategies that have worked for me in the past when I take a mathematics test.	☐ 1	☐ 2	☐ 3	☐ 4
b) After I solve a mathematics test question, I ask myself if there was an easier way to do it.	☐ 1	☐ 2	☐ 3	☐ 4
c) I pace myself in order to have enough time on mathematics tests.	☐ 1	☐ 2	☐ 3	☐ 4
d) I consciously focus my attention on important information in the question on mathematics tests.	☐ 1	☐ 2	☐ 3	☐ 4
e) I read the instructions carefully before I begin a mathematics test.	☐ 1	☐ 2	☐ 3	☐ 4
f) I think of several ways to solve a mathematics problem and choose the best one when taking a mathematics test.	☐ 1	☐ 2	☐ 3	☐ 4
g) When I get confused during a mathematics test, I stop and reread the question.	☐ 1	☐ 2	☐ 3	☐ 4
h) I know what kind of information is most important in solving a mathematics test question.	☐ 1	☐ 2	☐ 3	☐ 4

i) I use helpful strategies automatically during a mathematics test. ☐1 ☐2 ☐3 ☐4

Notes for National Project Managers:

This question is new in the PISA 2012 Field Trial.

This set of items assesses test-taking strategies. 'Test-taking skills' refers to skills that enable students to demonstrate more fully knowledge that they have (e.g., being familiar with the question/answer format, knowing the meaning of vocabulary used in directions, being able to pace oneself appropriately during timed tests). Previous research has found that academically successful students have more effective strategies for taking tests than less successful students.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST55Q01-ST55Q04

ST55

Q **How many hours do you typically spend per week attending <out-of-school-time lessons> in the following subjects?**

These are only lessons in subjects that you are also learning at school, that you spend learning extra time outside of normal school hours. The lessons may be given at your school, at your home or somewhere else.

(Please tick only one box in each row.)

	I do not attend <out-of-school time lessons> in this subject	*Less than 2 hours a week*	*2 or more but less than 4 hours a week*	*4 or more but less than 6 hours a week*	*6 or more hours a week*
a) <Test language>	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
b) Mathematics	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
c) <Science>	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
d) Other Subjects	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

Notes for National Project Manager:

This question has been reintroduced from the PISA 2009 Main Survey (StQ32).

This item provides information on the amount of time students spend in out-of-school lessons in a variety of subjects.

Stem: **<out-of-school-time lessons>** - Are any lessons in the student's school subjects, that he or she spends extra time learning outside of normal school hours. The lessons might be held at school, at home, or elsewhere.

Item a): **<test language>** - This should refer to the language of instruction in which you would administer the PISA reading assessment. It should be adapted to refer to the national name of the "language of instruction" course or lessons.

Item c): **<science>** refers only to the core science subjects of physics, chemistry, Earth science and biology either taught in your curriculum as separate science subjects, or taught within a single 'integrated-science' subject. It does NOT include related subjects such as engineering, technology, mathematics, psychology, economics, nor possible Earth science topics included in geography courses. In many countries this needs to be adapted to the national context.

Adaptations to this question are a requirement. They need to be described in the Questionnaire Adaptation Spreadsheet and agreed between the NPM and the Consortium.

Notes for Translator:

This question is worded identically to that in the PISA 2009 Main Survey (StQ32), with only a slight change to the item stem to remove the phrase '(at school, at home or somewhere else).' Note also however, that the QEG recommended changing instructions to comply with the way all other items are given.

ST56Q01-ST56Q05

ST56

Q **For those subjects where you attend <out-of-school lessons>, please indicate whether these are either remedial or enriching in nature.**

<Remedial lessons> are providing help for students who have problems in learning the respective subject, while <enrichment lessons> are providing additional, mostly demanding content for students with high achievement in the subject.

(Please tick only one box in each row.)

	<Remedial lessons>	*<Enrichment lessons>*	*Not applicable*
a) <Test language>	☐ 1	☐ 2	☐ 3
b) Mathematics	☐ 1	☐ 2	☐ 3
c) <Science>	☐ 1	☐ 2	☐ 3
d) Other school subjects	☐ 1	☐ 2	☐ 3
e) <Study skills>	☐ 1	☐ 2	☐ 3

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

This item provides information on how students spend extra time learning outside of school lessons in a variety of subjects.

Stem: **<out-of-school-time lessons>** - This term refers to any lessons in the student's school subjects, that he or she spends extra time learning outside of normal school hours. The lessons might be held at school, at home, or elsewhere.

Answer category: **<Enrichment lessons> -** This refers to any lessons in addition to regular lessons designed to extend abilities of more able students.

Answer category: **<Remedial lessons>** - This refers to any lessons in addition to regular lessons designed to help students with learning difficulties.

Item a): **<test language>** - This refers to the language of instruction in which the PISA reading assessment is administered. In some countries <test language> may be taught in different school subjects, e.g. English language and English literature. If this is the case, <test language> has been adapted accordingly.

Item c): **<science>** - This term refers only to the core science subjects of physics, chemistry, Earth science and biology either taught in the country's curriculum as separate science subjects, or taught within a single 'integrated- science' subject. The term does not include related subjects such as engineering, technology, mathematics, psychology, economics, nor possible Earth science topics included in geography courses. In many countries this term has been adapted to the national context.

Item e): **<Study skills> -** Study skills are strategies and methods of purposeful learning, usually centred around reading and writing, time management, doing homework and/or preparing for tests or exams.

Adaptations to this question are a requirement. They need to be described in the Questionnaire Adaptation Spreadsheet and agreed between the NPM and the Consortium.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST57Q01-ST57Q06

ST57

Q Thinking about all school subjects: On average, how many hours do you spend each week on the following?

When answering, include time spent on the weekend too.

a) Homework or other study set by your teachers _____ *hours per week*

b) Out of the time spent in (a), how many hours do you work on your homework with somebody overlooking and providing help if necessary ("guided homework"), either at school or elsewhere? _____ *hours per week*

c) Work with a personal <tutor> (whether paid or not) _____ *hours per week*

d) Attend out of school classes organized by a commercial company, and paid for by your parents _____ *hours per week*

e) Study with a parent or other family member _____ *hours per week*

f) Repeat and train content from school lessons by working on a computer (e.g. learn vocabulary with training software) _____ *hours per week*

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

This item provides information on how students spend extra time learning outside of school lessons regardless of subject.

Item c): **<tutor>** - This refers to a person other than a parent or immediate family member assisting the student with school related work in a one-on-one format

Item d): 'out of school' - This refers to any classes in the student's school subjects, that he or she spends extra time learning outside of normal school hours. The lessons might be held at school, at home, or elsewhere.

Adaptations to this question are a requirement. They need to be described in the Questionnaire Adaptation Spreadsheet and agreed between the NPM and the Consortium.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST58Q01-ST58Q06

ST58

Q Thinking only about mathematics: On average, how many hours do you spend each week on the following?

When answering, include time spent on the weekend too.

a) Homework or other study set by your teachers _____ *hours per week*

b) Out of the time spent in (a), how many hours do you work on your homework with somebody overlooking and providing help if necessary ("guided homework"), either at school or elsewhere? _____ *hours per week*

c) Work with a personal <tutor> (whether paid or not) _____ *hours per week*

d) Attend out of school classes organized by a commercial company, and paid for by your parents _____ *hours per week*

e) Study with a parent or other family member _____ *hours per week*

f) Repeat and train content from school lessons by working on a computer (e.g. learn vocabulary with training software) _____ *hours per week*

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

This item provides information on how students spend extra time learning outside of school lessons regardless of subject.

Item c): **<tutor>** - This refers to a person other than a parent or immediate family member assisting the student with school related work in a one-on-one format

Item d): 'out of school' - This refers to any classes in the student's school subjects, that he or she spends extra time learning outside of normal school hours. The lessons might be held at school, at home, or elsewhere.

Adaptations to this question are a requirement. They need to be described in the Questionnaire Adaptation Spreadsheet and agreed between the NPM and the Consortium.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST59Q11-ST59Q31

ST59

Q ***What <mark> did your receive in the following subjects both in your last report and the last school you attended?***

For each subject consider the specific course in that subject you were taking. If taking more than one course in a subject, include only your highest <mark>.

	Last school report	*Last school you attended*
a) <Test language>	_____	_____
b) Mathematics	_____	_____
c) <Science>	_____	_____

Notes for National Project Manager:

This question has been reintroduced and modified from the PISA 2000 Main Survey (StQ41).

The purpose of this question is to provide information about the student's grades over several subjects. Research has shown that prior achievement and experience are predictors of future achievement.

Item Stem: **<mark>** This term refers to the teacher's standardized evaluation of student performance in a course or subject and should be adapted to the national context.

Item a): **<test language>** - This should refer to the language of instruction in which you would administer the PISA reading assessment. It should be adapted to refer to the national name of the 'language of instruction' course or lessons.

Item c): **<science>** - refers only to the core science subjects of physics, chemistry, Earth science and biology either taught in your curriculum as separate science subjects, or taught within a single 'integrated-science' subject. It does NOT include related subjects such as engineering, technology, mathematics, psychology, economics, nor possible Earth science topics included in geography courses. In many countries this needs to be adapted to the national context.

Adaptations to this question are a requirement. They need to be described in the Questionnaire Adaptation Spreadsheet and agreed between the NPM and the Consortium.

Notes for Translator:

This question is worded similarly to that in the PISA 2000 Main Survey (StQ41). The items are the same however the stem and answer categories have changed.

ST60Q01-ST60Q03

ST60

Q **In your last school report, how did your <mark> compare with the <pass mark> in each subject area?**

For each subject consider the specific course in that subject you were taking. If taking more than one course in a subject, include only your highest <mark>.

(Please tick only one box on each row.)

	Above the <pass mark>	*At the <pass mark>*	*Below the <pass mark>*
a) <Test language>	☐ 1	☐ 2	☐ 3
b) Mathematics	☐ 1	☐ 2	☐ 3
c) <Science>	☐ 1	☐ 2	☐ 3

Notes for National Project Manager:

This question has been reintroduced from the PISA 2000 Main Survey (StQ41) however the stem has been modified.

The purpose of this question is to provide information about the student's grades over several subjects in comparison to the pass mark. Research has shown that prior achievement and experience are predictors of future achievement.

Stem: **<mark>** This term refers to the teacher's standardized evaluation of student performance in a course or subject and should be adapted to the national context.

Stem and answer categories: **<Pass mark>** is a grade given by the teacher indicating the minimum level of proficiency considered as acceptable for the task assessed.

Item a): **<test language>** - This should refer to the language of instruction in which you would administer the PISA reading assessment. It should be adapted to refer to the national name of the 'language of instruction' course or lessons.

Item c): **<science>** - refers only to the core science subjects of physics, chemistry, Earth science and biology either taught in your curriculum as separate science subjects, or taught within a single 'integrated-science' subject. It does NOT include related subjects such as engineering, technology, mathematics, psychology, economics, nor possible Earth science topics included in geography courses. In many countries this needs to be adapted to the national context.

Adaptations to this question are a requirement. They need to be described in the Questionnaire Adaptation Spreadsheet and agreed between the NPM and the Consortium.

Notes for Translator:

This question was worded identically in the PISA 2000 Main Survey (StQ41) apart from the stem which has been modified.

ST61Q01-ST61Q08

ST61

Q **Have you been taught to do the following types of mathematics tasks during your time in school?**

(Please tick only one box on each row.)

	Frequently	*Sometimes*	*Rarely*	*Never*
a) Using a <train timetable>, how long it would take to get from one place to another.	☐ 1	☐ 2	☐ 3	☐ 4
b) Calculating how much more expensive a computer would be after adding tax.	☐ 1	☐ 2	☐ 3	☐ 4
c) Calculating how many square metres of tiles you need to cover a floor.	☐ 1	☐ 2	☐ 3	☐ 4
d) Understanding scientific tables presented in an article.	☐ 1	☐ 2	☐ 3	☐ 4
e) Solving an equation like $6x^2 + 5 = 29$	☐ 1	☐ 2	☐ 3	☐ 4
f) Finding the actual distance between two places on a map with a 1:10,000 scale.	☐ 1	☐ 2	☐ 3	☐ 4
g) Solving an equation like $2(x+3) = (x + 3)(x - 3)$	☐ 1	☐ 2	☐ 3	☐ 4
h) Calculating the power consumption of an electronic appliance per week.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question has been reintroduced from the PISA 2003 Main Survey (StQ31) however the stem and answer categories have been modified. The original item b), d) and h) have been deleted and new ones have been inserted, item e) has been modified.

The purpose of this question is to assess the student's opportunity to learn various types of mathematical skills and knowledge. The goal of these questions is to determine the extent to which students have been exposed to various types of mathematics problems.

Item a): **<train timetable>:** This needs to be adapted to the national context. In countries without train systems, for example, this may be substituted by <bus timetable>. Please note that this is an adaptation that needs to be approved by the consortium.

Notes for Translator:

This question is worded similarly to that in the PISA 2003 Main Survey (StQ31). The original item b), d) and h) have been deleted and new ones have been inserted, item e) has been modified. The stem has also been modified.

ST62Q01-ST62Q19

ST62

Q **Thinking about mathematical concepts: How familiar are you with the following terms?**

(Please tick only one box in each row.)

	Never heard of it	*Heard of it once or twice*	*Heard of it a few times*	*Heard of it often*	*Know it well, understand the concept*
a) Exponential Function	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
b) Divisor	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
c) Quadratic Function	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
d) Proper Number	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
e) Pythagorean Theorem	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
f) Linear Equation	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
g) Vectors	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
h) Complex Number	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
i) Rational Number	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
j) Radicals	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
k) Subjunctive Scaling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
l) Polygon	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
m) Declarative Fraction	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
n) Prime Number	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
o) Congruent Figure	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
p) Cosine	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
q) Arithmetic Mean	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
r) Area of a Circle	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
s) Probability	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

These variables measure opportunity to learn with an important set of modifications designed to correct for faking and other response biases. For this 'overclaiming' technique, items d, k and m are mathematics concepts that do not exist. Students that claim knowledge of these items may be faking their answers.

These foils are made my combining a term from grammar (i.e. proper, as in proper noun; subjunctive, as in subjunctive mood; declarative as in declarative sentence) with a mathematical term (i.e. number; scaling; fraction, respectively).

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

Q<62>: Notes for Test Administrator:

Please note that some of the options are in fact foils (i.e. not proper mathematics subjects). Some students may be aware of this aspect and suggest this is a typographical error. In such instances, simply instruct them to state this is something they have never heard of.

NOTE 3

The next six questions are about your experience with different kinds of mathematics problems in school. You will see a mathematics problem, followed by some questions about your experience with the problem.

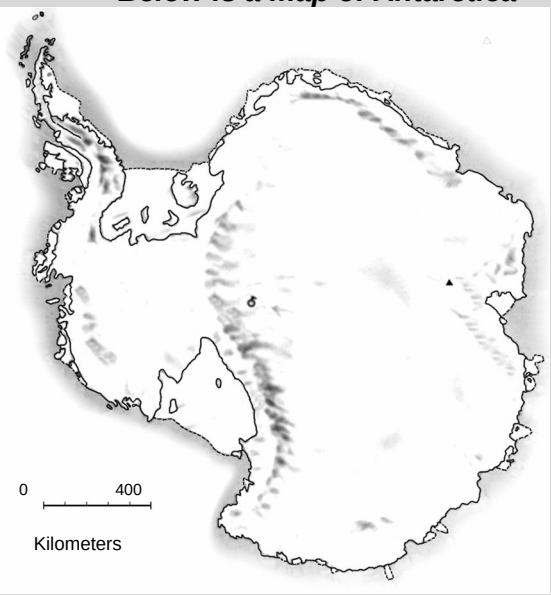
Please read each problem. You do NOT need to solve it.

ST63Q01-ST63Q02

ST63

Q **Read the problem in the box below. Then answer the questions that follow it.**

Below is a map of Antarctica



CONTINENT AREA

Estimate the area of Antarctica using the map scale.

Show your working out and explain how you made your estimate. (You can draw over the map if it helps you with your estimation).

We want to know about your experience with this type of problem in school. Do not solve it!

(Please tick only one box in each row.)

	Frequently	*Sometimes*	*Rarely*	*Never*
a) How often have you encountered this type of problem in your **mathematics lessons**?	☐ 1	☐ 2	☐ 3	☐ 4
b) How often have you encountered this type of problem in the **tests you**	☐ 1	☐ 2	☐ 3	☐ 4

have taken in school?

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

The purpose of this question is to measure the student's opportunity to learn various types of mathematical skills and knowledge. The goal of these questions is to determine whether students' are actually exposed to various types of skills and knowledge both in classroom lessons and during classroom examinations.

Students are first presented with an example of a problem, and then asked about their experiences with the type of problem presented.

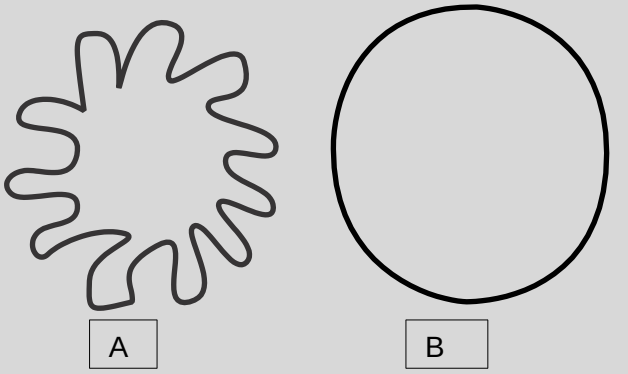
Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST64Q01-ST64Q02

ST64

Q **Read the problem in the box below. Then answer the questions that follow it.**



Describe a method for estimating the area of figure C.

We want to know about your experience with this type of problem in school. Do not solve it!

(Please tick only one box in each row.)

		Frequently	*Sometimes*	*Rarely*	*Never*
a)	How often have you encountered this type of problem in your **mathematics lessons**?	☐ 1	☐ 2	☐ 3	☐ 4
b)	How often have you encountered this type of problem in the **tests you have taken in school?**	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

Students are first presented with an example of a problem, and then asked about their experiences with the type of problem presented.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

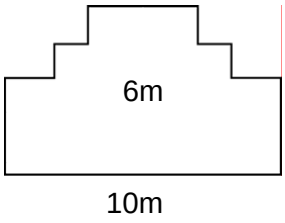
ST65Q01-ST65Q02

ST65

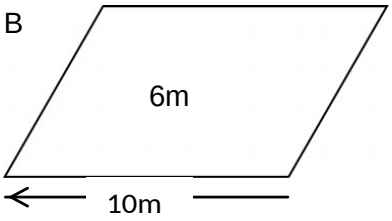
Q **Read the problem in the box below. Then answer the questions that follow it.**

A carpenter has 32 metres of timber and wants to make a border around a garden bed. He is considering the following designs for the garden bed.

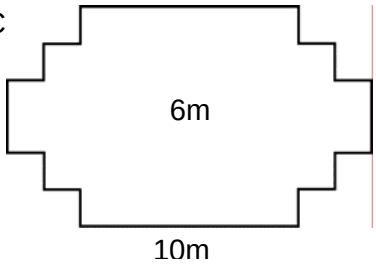
A



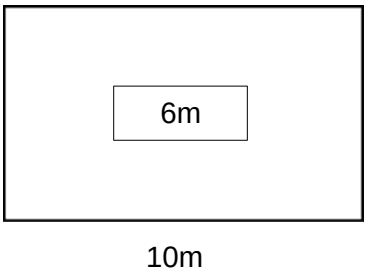
B



C



D



Circle either "Yes" or "No" for each design to indicate whether the garden bed can be made with 32 metres of timber

Garden bed design	Using this design, can the garden bed be made with 32 metres of timber?
Design A	Yes / No
Design B	Yes / No
Design C	Yes / No
Design D	Yes / No

We want to know about your experience with this type of problem in school. Do not solve it!

(Please tick only one box in each row.)

	Frequently	*Sometimes*	*Rarely*	*Never*
a) How often have you encountered this type of problem in your **mathematics lessons**?	☐ 1	☐ 2	☐ 3	☐ 4
b) How often have you encountered this type of problem in the **tests you have taken in school?**	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

Students are first presented with an example of a problem, and then asked about their experiences with the type of problem presented.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST66Q01-02

ST66

Q **Read the problem in the box below. Then answer the questions that follow it.**

A woman in hospital receives an injection of penicillin. Her body gradually breaks the penicillin down so that one hour after the injection only 60% of the penicillin will remain active.

This pattern continues: at the end of each hour only 60% of the penicillin that was present at the end of the previous hour remains active.

Suppose the woman is given a dose of 300 milligrams of penicillin at 8 o'clock in the morning.

Complete this table showing the amount of penicillin that will remain active in the woman's blood at intervals of one hour from 0800 until 1100 hours.

Time	**0800**	**0900**	**1000**
Penicillin (mg)	**300**		

We want to know about your experience with this type of problem in school. Do not solve it!

(Please tick only one box in each row.)

		Frequently	*Sometimes*	*Rarely*	*Never*
a)	How often have you encountered this type of problem in your **mathematics lessons**?	☐ 1	☐ 2	☐ 3	☐ 4
b)	How often have you encountered this type of problem in the **tests you have taken in school?**	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

Students are first presented with an example of a problem, and then asked about their experiences with the type of problem presented.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST67Q01-ST67Q02

ST67

Q **Read the problem in the box below. Then answer the questions that follow it.**

> Mei-Ling from Singapore was preparing to go to South Africa for 3 months as an exchange student. She needed to change some Singapore dollars (SGD) into South African rand (ZAR).
>
> During these 3 months the exchange rate had changed from 4.2 to 4.0 ZAR per SGD.
>
> Was it in Mei-Ling's favour that the exchange rate now was 4.0 ZAR instead of 4.2 ZAR, when she changed her South African rand back to Singapore dollars? Give an explanation to support your answer.

We want to know about your experience with this type of problem in school. Do not solve it!

(Please tick only one box in each row.)

		Frequently	*Sometimes*	*Rarely*	*Never*
a)	How often have you encountered this type of problem in your **mathematics lessons**?	☐ 1	☐ 2	☐ 3	☐ 4
b)	How often have you encountered this type of problem in the **tests you have taken in school?**	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

Students are first presented with an example of a problem, and then asked about their experiences with the type of problem presented.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

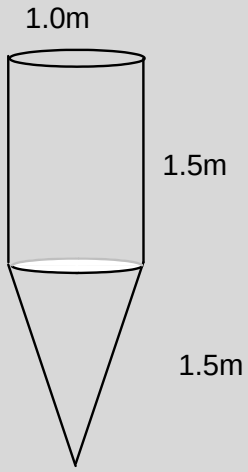
ST68Q01-ST68Q02

ST68

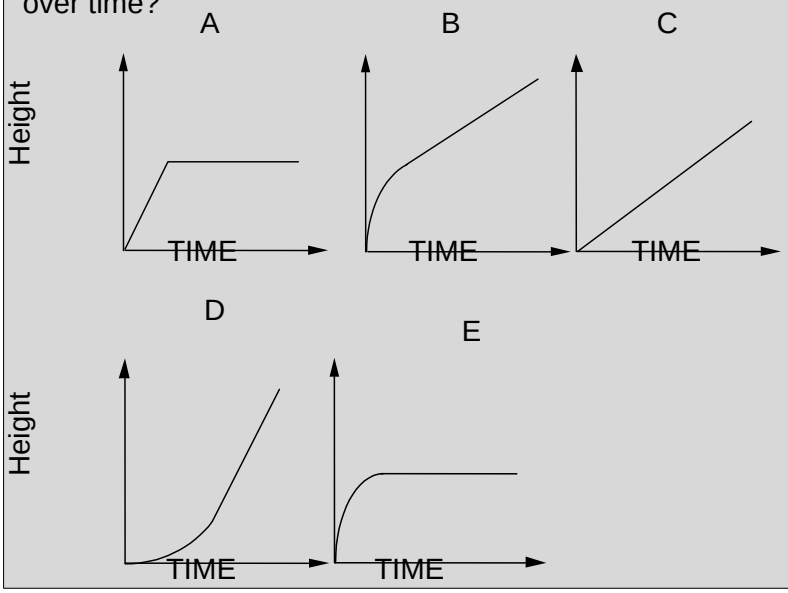
Q **Read the problem in the box below. Then answer the questions that follow it.**

A water tank has shape and dimensions as shown in the diagram.

At the beginning the tank is empty. Then it is filled with water at the rate of one litre per second.



Which of the following graphs shows how the height of the water surface changes over time?



We want to know about your experience with this type of problem in school. Do not solve it!

(Please tick only one box in each row.)

		Frequently	*Sometimes*	*Rarely*	*Never*
a)	How often have you encountered this type of problem in your **mathematics lessons**?	☐ 1	☐ 2	☐ 3	☐ 4
b)	How often have you encountered this type of problem in the **tests you have taken in school?**	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

Students are first presented with an example of a problem, and then asked about their experiences with the type of problem presented.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

Q<63 to Q68>: Notes for Test Administrator:

Some students may begin to solve the problems. It is important to instruct them not to do so, but rather focus on the questions at the end.

ST69Q01-ST69Q03

ST69

Q How many minutes, on average, are there in a <class period> for the following subjects?

a) Minutes in a <class period> in < test language>: _____ *Minutes*

b) Minutes in a <class period> in mathematics: _____ *Minutes*

c) Minutes in a <class period> in <science>: _____ *Minutes*

ST70Q01-ST70Q03

ST70

Q How many <class periods> per week do you typically have for the following subjects?

a) Number of <class periods> per week in <test language>: _____ *<class periods>*

b) Number of <class periods> per week in mathematics: _____ *<class periods>*

c) Number of <class periods> per week in <science>: _____ *<class periods>*

ST71Q01

ST71

Q In a normal, full week at school, how many <class periods> do you have <in total>?

Number of **ALL** <class periods> _____ *<class periods>*

ST72Q01

ST72

Q On average, about how many students attend your <test language> class?

_____ *students*

Notes for National Project Manager:

This question has been retained from the PISA 2009 Main Survey (StQ28, StQ29, StQ30 and StQ35).

The purpose of this question is to provide information on the amount of time students actually spend in school in various subjects.

In some countries the number of minutes in a **<class period>** may be the same for all school subjects. In this case the reference to the different subjects may be omitted to avoid confusion in students.

Where this information is available in a reliable and up-to-date central database, this question may be omitted if the data can be provided to the Consortium in a convenient format at the time of Main Survey data submission. This must be agreed upon in the Questionnaire Adaptation process.

Stem and all items: **<class period>** - the length of time each lesson runs for in a normal school week. Translators should use the term best understood in each country to describe this basic unit.

StQ71 & 72: **<test language>** - This should refer to the language of instruction in which the PISA reading assessment is administered. It should be adapted to refer to the national name of the 'language of instruction' course or lessons.

In some countries <test language> may be taught in different school subjects, e.g. English language and English literature. If this is the case, <test language> has to be translated accordingly.

StQ71 & 72: **<science>** - refers only to the core science subjects of physics, chemistry, Earth science and biology either taught in your curriculum as separate science subjects, or taught within a single 'integrated-science' subject. It does NOT include related subjects such as engineering, technology, mathematics, psychology, economics, nor possible Earth science topics included in geography courses. In many countries this needs to be adapted to the national context.

Adaptations to this question are a requirement. They need to be described in the Questionnaire Adaptation Spreadsheet and agreed between the NPM and the Consortium.

Notes for Translator:

This question was worded identically in the PISA 2009 Main Survey (StQ28, StQ29, StQ30 and StQ35).

NOTE 4

The next four questions are about your experience with different kinds of mathematics problems in school. You will see descriptions of problems and grey-color boxes, each containing a mathematics problem.

Please read each problem. You do NOT need to solve it.

ST73Q01-ST73Q02

ST73

Q *In the box are a series of problems. Each require you to understand a problem written in text and perform the appropriate calculations. Usually the problem talks about practical situations, but the numbers and people and places mentioned are made up. All the information you need is given. Here are two examples:*

1) Ann is two years older than Betty and Betty is four times as old as Sam. When Betty is 30, how old is Sam?

2) Mr Smith bought a television and a bed. The television cost $625 but he got a 10% discount. The bed cost $200. He paid $20 for delivery. How much money did Mr Smith spend?

We want to know about your experience with these types of word problems in school. Do not solve it!

(Please tick only one box in each row.)

		Frequently	*Sometimes*	*Rarely*	*Never*
a)	How often have you encountered these types of problems in your **mathematics lessons**?	☐ 1	☐ 2	☐ 3	☐ 4
b)	How often have you encountered these types of problems in the **tests you have taken in school?**	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

The purpose of this question is to measure the student's opportunity to learn various types of mathematical skills and knowledge. The goal of these questions is to determine whether students are actually exposed to various types of skills and knowledge both in classroom lessons and during classroom examinations.

Students are first presented with a verbal definition of one of four possible mathematics problem types, as outlined in the PISA framework document. Next, at least two examples of each problem type are presented. Multiple examples are provided in order to ensure that the student avoids focusing on the specific content of a particular item (e.g. problems about multiplication or percentages) and instead considers the general type of problem as outlined in each definition.

The ultimate goal of analysis for these questions is a profile of task/problem experiences, which can be used to identify areas where students may have missed an opportunity to learn.

This specific question measures students' opportunity to learn word problems.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST74Q01-ST74Q02

ST74

Q *Below are examples of another set of mathematical skills.*

1) Solve 2x + 3 = 7.
2) Find the volume of a box with sides 3m, 4m and 5m.

We want to know about your experience with these types of items in school. Do not solve it!

(Please tick only one box in each row.)

		Frequently	*Sometimes*	*Rarely*	*Never*
a)	How often have you encountered these types of problems in your **mathematics lessons**?	☐ 1	☐ 2	☐ 3	☐ 4
b)	How often have you encountered these types of problems in the **tests you have taken in school?**	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

This specific question measures students' opportunity to learn math exercises.

Notes for Translator:

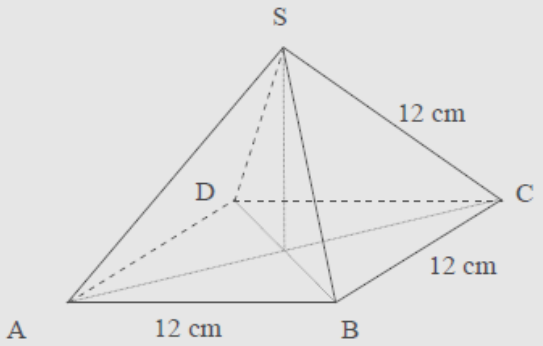
This question is new in the PISA 2012 Field Trial.

ST75Q01-ST75Q02

ST75

Q *In the next type of problems, you have to use mathematical knowledge and draw conclusions. There is no practical application provided. Here are two examples*.

1) Here you need to use geometrical theorems:



Determine the height of the pyramid!

2) Here you have to know what a prime number is:

If n is any number: can $(n+1)^2$ be a prime number?

We want to know about your experience with these types of problems in school. Do not solve it!

(Please tick only one box in each row.)

	Frequently	*Sometimes*	*Rarely*	*Never*
a) How often have you encountered these types of problems in your **mathematics lessons**?	☐ 1	☐ 2	☐ 3	☐ 4
b) How often have you encountered these types of problems in the **tests you**	☐ 1	☐ 2	☐ 3	☐ 4

have taken in school?

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial. This specific question measures students' opportunity to learn pure mathematics problems.

Notes for Translator:

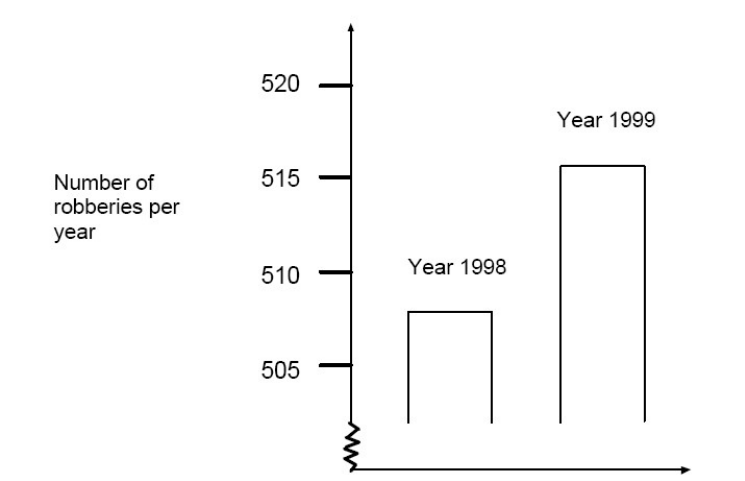
This question is new in the PISA 2012 Field Trial.

ST76Q01-ST76Q02

Q *In this type of problem, you have to apply suitable mathematical knowledge to find a useful answer to a problem that arises in everyday life or work. The data and information are about real situations. Here are two examples.*

Example 1:

A TV reporter says "This graph shows that there is a huge increase in the number of robberies from 1998 to 1999."



Do you consider the reporter's statement to be a reasonable interpretation of the graph? Give an explanation to support your answer.

Example 2:

For years the relationship between a person's recommended maximum heart rate and the person's age was described by the following formula:

Recommended maximum heart rate = 220 - *age*

Recent research showed that this formula should be modified slightly. The new formula is as follows:

Recommended maximum heart rate = 208 – (0.7 × *age*)

From which age onwards does the recommended maximum heart rate increase as a result of the introduction of the new formula? Show your work.

We want to know about your experience with these types of problems in school. Do not solve it!

(Please check only one box in each row.)

		Frequently	*Sometimes*	*Rarely*	*Never*
a)	How often have you encountered these types of problems in your **mathematics lessons**?	☐ 1	☐ 2	☐ 3	☐ 4
b)	How often have you encountered these types of problems in the **tests you have taken in school?**	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

This specific question measures students' opportunity to learn real life problems.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

Q<73 to 76>: Notes for Test Administrator:

Some students may begin to solve the problems. It is important to instruct them not to do so, but rather focus on the questions at the end.

SECTION D: ABOUT YOUR MATHEMATICS EXPERIENCES

ST77Q01-ST77Q06

ST77

Q How often do these things happen in your mathematics lessons?

(Please tick only one box in each row.)

	Every Lesson	*Most Lessons*	*Some Lessons*	*Never or Hardly Ever*
a) The teacher shows an interest in every student's learning.	☐ 1	☐ 2	☐ 3	☐ 4
b) The teacher gives extra help when students need it.	☐ 1	☐ 2	☐ 3	☐ 4
c) Students work from books and other printed material.	☐ 1	☐ 2	☐ 3	☐ 4
d) The teacher helps students with their learning.	☐ 1	☐ 2	☐ 3	☐ 4
e) The teacher continues teaching until the students understand.	☐ 1	☐ 2	☐ 3	☐ 4
f) The teacher gives students an opportunity to express opinions.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question has been reintroduced from the PISA 2003 Main Survey (StQ38) with only items a, c, d, e, g and j being retained.

Provides information on teacher support in Mathematics classes (a school climate variable); these items are the same as those used to derive this construct in PISA 2003.

Item c): This item provides additional information about the use of printed educational material in classes.

If international or national options are in the same booklet as the Student Questionnaires, National Project

Managers may treat them as separate sections and add them to the list of sections in the introduction.

Notes for Translator:

This question was worded identically in the PISA 2003 Main Survey (StQ38) however only items a, c, d, e, g and j have been retained.

ST78Q01-ST78Q05

Q **How often do these things happen with your mathematics homework?**

(Please tick only one box in each row.)

	Always or almost always	*Often*	*Sometimes*	*Never*
a) My mathematics teacher discusses mistakes with us to help us learn from our mistakes.	☐ 1	☐ 2	☐ 3	☐ 4
b) My mathematics teacher gives feedback on how we solve our homework problems.	☐ 1	☐ 2	☐ 3	☐ 4
c) My mathematics teacher rewards finding "new" approaches to solving problems – approaches that we have to find on our own and that have not been explicitly taught.	☐ 1	☐ 2	☐ 3	☐ 4
d) My mathematics teacher gives homework problems that require us to go beyond what has been explicitly taught in class.	☐ 1	☐ 2	☐ 3	☐ 4
e) My mathematics teacher rewards the effort that we put into our homework regardless of whether we get the right answer.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial. The question provides information on the extent that the teacher supports mathematics homework; this is a new school climate variable that is set out in the PISA 2012 Context Questionnaire Framework (QEG(1010)1).

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST79Q01-ST79Q18

Q **Thinking about the mathematics teacher that taught your last mathematics class: How often do these things happen?**

(Please tick only one box in each row.)

	Always or almost always	*Often*	*Sometimes*	*Never*
a) The teacher sets clear goals for our learning.	☐ 1	☐ 2	☐ 3	☐ 4
b) The teacher asks me or my classmates to present our thinking or reasoning at some length.	☐ 1	☐ 2	☐ 3	☐ 4
c) The teacher gives different work to classmates that have difficulties learning and/or to those who can advance faster.	☐ 1	☐ 2	☐ 3	☐ 4
d) The teacher assigns projects that require at least one week to complete.	☐ 1	☐ 2	☐ 3	☐ 4
e) The teacher tells me about how well I am doing in my mathematics class.	☐ 1	☐ 2	☐ 3	☐ 4
f) The teacher asks questions to check whether we have understood what was taught.	☐ 1	☐ 2	☐ 3	☐ 4
g) The teacher has us work in small groups to come up with joint solutions to a problem or task.	☐ 1	☐ 2	☐ 3	☐ 4
h) At the beginning of a lesson, the teacher presents a short summary of the previous lesson.	☐ 1	☐ 2	☐ 3	☐ 4

	Always or almost always	*Often*	*Sometimes*	*Never*
i) The teacher reviews the homework that we prepare.	☐ 1	☐ 2	☐ 3	☐ 4
j) The teacher asks us to help plan classroom activities or topics.	☐ 1	☐ 2	☐ 3	☐ 4
k) The teacher gives me feedback on my strengths and weaknesses in mathematics.	☐ 1	☐ 2	☐ 3	☐ 4
l) The teacher tells us what is expected of us when we get a test, quiz or assignment.	☐ 1	☐ 2	☐ 3	☐ 4
m) The teacher checks our <exercise books>.	☐ 1	☐ 2	☐ 3	☐ 4
n) The teacher has us argue about different approaches to solving a mathematics problem.	☐ 1	☐ 2	☐ 3	☐ 4
o) The teacher tells us what we have to learn.	☐ 1	☐ 2	☐ 3	☐ 4
p) The teacher gives a test or quiz to assess student learning.	☐ 1	☐ 2	☐ 3	☐ 4
q) The teacher tells me what I need to do to become better in mathematics.	☐ 1	☐ 2	☐ 3	☐ 4
r) The teacher has us solve realistic problems from daily life.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager

The question is new in the PISA 2012 Field Trial. It provides information about the teaching practices in mathematics. It aims to provide information on profiles of instructional strategies. The items represent the three constructs ‘structuring’, ‘student orientation’, and ‘enhanced activities’.

Item a): This item refers to the mathematics teacher explicitly stating learning goals. Learning goals function as advanced organizers and help students to understand the structure of the unit and the purpose of lectures and assignments.

Item c): This item refers to ability grouping within classes.

Item h): A ‘lesson’ is defined as the basic unit used to break up the teaching day. A class of students will typically receive several lessons during a term/semester/year.

Item i): ‘Homework’ is defined as specific tasks assigned by a teacher to be completed by the student outside of class time.

Items l) and p): Both a ‘test’ and a ‘quiz’ refer to a performance assessment in schools. They may be either used in a summative or in a formative way. Moreover they may also be used for lesson planning. A quiz is typically shorter than a test and often has a smaller relative influence on the final grade for the semester or school year.

Item m): An ‘exercise book’ is a notebook that is used by students to copy down the lesson and for recording individual or group work, e.g. when solving assignments in a written form.

Notes for translator

This question is new in the PISA 2012 Field Trial.

Q **Thinking about the mathematics teacher that taught your last mathematics class: To what extent do you agree with the following statements?**

(Please tick only one box in each row.)

	Strongly agree	*Agree*	*Disagree*	*Strongly disagree*
a) The teacher asks questions that make us reflect on the problem.	☐ 1	☐ 2	☐ 3	☐ 4
b) The teacher gives tasks that involve calculations alone.	☐ 1	☐ 2	☐ 3	☐ 4
c) The teacher gives problems with definite solutions.	☐ 1	☐ 2	☐ 3	☐ 4
d) The teacher gives problems that require us to think about them for an extended time.	☐ 1	☐ 2	☐ 3	☐ 4
e) The teacher asks us to decide on our own procedures for solving complex problems.	☐ 1	☐ 2	☐ 3	☐ 4
f) The teacher presents problems for which there is no immediately obvious method of solution.	☐ 1	☐ 2	☐ 3	☐ 4
g) The teacher presents problems in different contexts so that students know whether they have understood the concepts.	☐ 1	☐ 2	☐ 3	☐ 4
h) The teacher helps us to learn from mistakes we have made.	☐ 1	☐ 2	☐ 3	☐ 4
i) The teacher asks us to explain how we have solved a problem.	☐ 1	☐ 2	☐ 3	☐ 4

	Strongly agree	*Agree*	*Disagree*	*Strongly disagree*
j) The teacher presents problems that require students to apply what they have learned to new contexts.	☐ 1	☐ 2	☐ 3	☐ 4
k) The teacher gives problems that can be solved in several different ways.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial. The purpose of this question is to obtain student-reported information about their mathematics instruction. The items ask for cognitive activation in mathematics lessons. Some of them are phrased negatively, i.e. items b), c) and g).

Item a): This item refers to questions that go beyond a simple reproduction of practiced knowledge, but rather require students to use elements that are unfamiliar, make new connections or combine solution strategies in new ways.

Item c): This item refers to problems that have a single best solution as opposed to mathematical problems with a solution that is not immediately obvious or that could be solved in several different ways.

Item d): 'An extended time' here means that students cannot give an answer right away by reproducing previously learned strategies or doing simple calculations, but rather need to spend some time reflecting on possible approaches to the problem.

Items f) and j): A change of 'context' could e.g. refer to the use of a real life problem which requires the students to use mathematical solutions they have previously practiced by just calculating with numbers - or the opposite.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST81Q01-ST81Q05

ST81

Q How often do these things happen in your mathematics lessons?

(Please tick only one box in each row.)

	Every Lesson	*Most Lessons*	*Some Lessons*	*Never or Hardly Ever*
a) Students don't listen to what the teacher says.	☐ 1	☐ 2	☐ 3	☐ 4
b) There is noise and disorder.	☐ 1	☐ 2	☐ 3	☐ 4
c) The teacher has to wait a long time for students to <quiet down>.	☐ 1	☐ 2	☐ 3	☐ 4
d) Students cannot work well.	☐ 1	☐ 2	☐ 3	☐ 4
e) Students don't start working for a long time after the lesson begins.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question has been retained from the PISA 2009 Main Survey (StQ36) however the stem has been modified to be mathematics specific and the answer categories have changed slightly.

The purpose of this question is to provide information on discipline in Mathematics classes (a school climate variable); these items are the same as those used to derive this construct in PISA 2009.

Notes for Translator:

This question was worded identically in the PISA 2009 Main Survey (StQ36) however the stem has been adjusted to be mathematics specific and the answer categories have changed slightly.

ST82Q01-ST82Q03

ST82

Q **Below you will find descriptions of three mathematics teachers. Read each of the descriptions of these teachers. Then let us know to what extent you agree with the final statement.**

(Please tick only one box in each row.)

	Strongly agree	*Agree*	*Disagree*	*Strongly disagree*
a) Ms. <name> sets mathematics homework every other day. She always gets the answers back to students before examinations. **Ms. <name> is concerned about her students learning.**	☐ 1	☐ 2	☐ 3	☐ 4
b) Mr. <name> sets mathematics homework once a week. He always gets the answers back to students before examinations. **Mr. <name> is concerned about his students learning.**	☐ 1	☐ 2	☐ 3	☐ 4
c) Ms. <name> sets mathematics homework once a week. She never gets the answers back before examinations. **Ms. <name> is concerned about her students learning.**	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

This and the following question measure students' perceptions of their teachers using the anchoring vignette methodology. Anchoring vignettes ask respondents for self-assessments of the concept being measured, as well as assessments of each of several hypothetical individuals described in the vignettes. Since the actual levels for the people in the vignettes are invariant over respondents, the only reason answers to the vignettes will differ over respondents is interpersonal incomparability. The technique provides sufficient information for statistical models that are designed to correct the self-assessments.

These specific questions present three vignettes.

Item a): This vignette describes a teacher with a high level of concern and interest in students learning.

Item b): This vignette describes a teacher with a medium level of concern and interest in students learning.

Item c): This vignette describes a teacher with low concern and interest in student learning.

Item a) b) & c): **<name>** - please choose a typical name for a male/female teacher in the country.

In this way, the three vignettes are used to anchor student judgments, providing context for the subsequent teacher ratings in the following question.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST83Q01-ST83Q04

ST83

Q **Thinking about the mathematics teacher who taught your last mathematics class: To what extent do you agree with the following statements?**

(Please tick only one box in each row.)

	Strongly agree	*Agree*	*Disagree*	*Strongly disagree*
a) My teacher lets us know they need to work hard.	☐ 1	☐ 2	☐ 3	☐ 4
b) My teacher provides extra help when needed.	☐ 1	☐ 2	☐ 3	☐ 4
c) My teacher helps students with their learning.	☐ 1	☐ 2	☐ 3	☐ 4
d) My teacher gives students the opportunity to express opinions.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

The three vignettes in the previous question are used to anchor student judgments, providing context for the teacher ratings in this question.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST84Q01-ST84Q03

Q **Below you will find descriptions of three mathematics teachers. Read each of the descriptions of these teachers. Then let us know to what extent you agree with the final statement.**

(Please tick only one box in each row.)

	Strongly agree	*Agree*	*Disagree*	*Strongly disagree*
a) The students in Ms. <name> class frequently interrupt her lessons. She also always arrives to class five minutes early. **Ms. <name> is in control of her classroom.**	☐ 1	☐ 2	☐ 3	☐ 4
b) The students in Ms. <name> class are calm and orderly. She always arrives on time to class. **Ms. <name> is in control of her classroom.**	☐ 1	☐ 2	☐ 3	☐ 4
c) The students in Mr. <name> class frequently interrupt his lessons. As a result, he often arrives to class five minutes late. **Mr. <name> is in control of his classroom.**	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

This and the following question measure students' perceptions of their teachers using the anchoring vignette methodology. Anchoring vignettes ask respondents for self-assessments of the concept being measured, as well as assessments of each of several hypothetical individuals described in the vignettes.. Since the actual levels for the people in the vignettes are invariant over respondents, the only reason answers to the vignettes will differ over respondents is interpersonal incomparability. The technique provides sufficient information for statistical models that are designed to correct the self-assessments.

These specific questions present three vignettes.

Item a): This vignette describes a teacher with a medium level of classroom management.

Item b): This vignette describes a teacher with a high level of classroom management.

Item c): This vignette describes a teacher with a low level of classroom management.

Item a) b) & c): **<name>** - please choose a typical name for a male/female teacher in the country.

In this way, the three vignettes are used to anchor student judgments, providing context for the subsequent teacher ratings in the following question.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST85Q01-ST85Q04

Q **Thinking about the mathematics teacher who taught your last mathematics class: To what extent do you agree with the following statements?**

(Please tick only one box in each row.)

	Strongly agree	*Agree*	*Disagree*	*Strongly Disagree*
a) My teacher gets students to listen to him or her.	☐ 1	☐ 2	☐ 3	☐ 4
b) My teacher keeps the class orderly.	☐ 1	☐ 2	☐ 3	☐ 4
c) My teacher starts lessons on time.	☐ 1	☐ 2	☐ 3	☐ 4
d) The teacher has to wait a long time for students to <quiet down>.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial. The three vignettes in the previous question are used to anchor student judgments, providing context for the teacher ratings in this question.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

SECTION E: ABOUT YOUR SCHOOL

ST86Q01-ST86Q05

ST86

Q Thinking about the teachers at your school: To what extent do you agree with the following statements?

(Please tick only one box in each row.)

	Strongly agree	*Agree*	*Disagree*	*Strongly disagree*
a) Students get along well with most teachers.	☐ 1	☐ 2	☐ 3	☐ 4
b) Most teachers are interested in students' well-being.	☐ 1	☐ 2	☐ 3	☐ 4
c) Most of my teachers really listen to what I have to say.	☐ 1	☐ 2	☐ 3	☐ 4
d) If I need extra help, I will receive it from my teachers.	☐ 1	☐ 2	☐ 3	☐ 4
e) Most of my teachers treat me fairly.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question has been reintroduced from the PISA 2003 Main Survey (StQ26).

These items provide information on school climate, forming a Student-teacher Relations scale in PISA 2000, 2003, and 2006.

Notes for Translator:

This question was worded identically in the PISA 2003 Main Survey (StQ26).

ST87Q01-ST87Q09

Q **Thinking about your school: To what extent do you agree with the following statements?**

(Please tick only one box in each row.)

	Strongly agree	*Agree*	*Disagree*	*Strongly disagree*
a) I feel like an outsider (or left out of things) at school.	☐ 1	☐ 2	☐ 3	☐ 4
b) I make friends easily at school.	☐ 1	☐ 2	☐ 3	☐ 4
c) I feel like I belong at school.	☐ 1	☐ 2	☐ 3	☐ 4
d) I feel awkward and out of place in my school.	☐ 1	☐ 2	☐ 3	☐ 4
e) Other students seem to like me.	☐ 1	☐ 2	☐ 3	☐ 4
f) I feel lonely at school.	☐ 1	☐ 2	☐ 3	☐ 4
g) I feel happy at school.	☐ 1	☐ 2	☐ 3	☐ 4
h) Things are ideal in my school.	☐ 1	☐ 2	☐ 3	☐ 4
i) I am satisfied with my school.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question has been reintroduced from the PISA 2003 Main Survey (StQ27). The stem and items b), c) d) and f) have been modified and items g), h) and i) are new.

This question provides information on school climate.

Items a) to f): These items form a Sense of Belonging scale in PISA 2000 and 2003. However, since these earlier cycles, an emerging literature points to the importance of subjective well-being and life satisfaction.

Items g), h), i): These items are intended to capture the domain of subjective well-being and life satisfaction.

Plausibly, two scales reflecting negative (a, d, and f) and positive (b, c, e, g, h, and i) affective states will emerge from the field trial.

Notes for Translator:

This question is worded similarly to that in the PISA 2003 Main Survey (StQ27). The stem and items b), c) d) and f) have been modified and items g), h) and i) are new.

Q<87>: Notes for Test Administrator:

'School' refers to the whole school, and not just being among peers in the school grounds.

ST88Q01-ST88Q04

Q **Thinking about what you have learned in school*:* To what extent do you agree with the following statements?**

(Please tick only one box in each row.)

		Strongly agree	*Agree*	*Disagree*	*Strongly disagree*
a)	School has done little to prepare me for adult life when I leave school.	☐ 1	☐ 2	☐ 3	☐ 4
b)	School has been a waste of time.	☐ 1	☐ 2	☐ 3	☐ 4
c)	School helped give me confidence to make decisions.	☐ 1	☐ 2	☐ 3	☐ 4
d)	School has taught me things which could be useful in a job.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question has been reintroduced from the PISA 2003 Main Survey (StQ24).

These items provide information on general attitudes toward school. Attitudes are students' evaluation (positive or negative) of school. Research has demonstrated that attitudes predict intentions which then predict behaviours.

Notes for Translator:

This question was worded identically in the PISA 2003 Main Survey (StQ24).

ST89Q01-ST89Q06

Q **Thinking about your school: To what extent do you agree with the following statements?**

(Please tick only one box in each row.)

		Strongly agree	*Agree*	*Disagree*	*Strongly disagree*
a)	It is good for me to <pass my classes>.	☐ 1	☐ 2	☐ 3	☐ 4
b)	Trying hard in school will help me get a good job.	☐ 1	☐ 2	☐ 3	☐ 4
c)	Trying hard in school will help me get into a good <college>.	☐ 1	☐ 2	☐ 3	☐ 4
d)	I enjoy receiving good <grades>.	☐ 1	☐ 2	☐ 3	☐ 4
e)	Trying hard in school is important.	☐ 1	☐ 2	☐ 3	☐ 4
f)	Trying hard in school will not do any good.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

These items provide information on attitudes toward school. Attitudes are students' evaluation (positive or negative) of school. Research has demonstrated that attitudes predict intentions which then predict behaviours.

Item a): **<pass my classes>** This term refers to completing a course with at least a minimum level of proficiency (as opposed to failing a course and being forced to repeat it) and should be adapted to the national context.

Item c): **<college>** This term refers to university level or tertiary education and should be adapted to the national context.

Item d): **<grades>** This term refers to the teacher's standardized evaluation of student performance in a course or subject and should be adapted to the national context.

Adaptations to this question are a requirement. They need to be described in the Questionnaire Adaptation Spreadsheet and agreed between the NPM and the Consortium.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST90Q01-ST90Q06

Q **Thinking about how others view your school: To what extent do you agree with the following statements?**

(Please tick only one box in each row.)

		Strongly agree	*Agree*	*Disagree*	*Strongly disagree*
a)	My parents believe that it is beneficial for me to try as hard as I can to do well in school this year.	☐ 1	☐ 2	☐ 3	☐ 4
b)	My parents believe that it is good for me to <pass my classes>.	☐ 1	☐ 2	☐ 3	☐ 4
c)	My friends enjoy studying for their classes.	☐ 1	☐ 2	☐ 3	☐ 4
d)	My friends try to do better than each other in school.	☐ 1	☐ 2	☐ 3	☐ 4
e)	My friends think that trying hard in school will not do any good.	☐ 1	☐ 2	☐ 3	☐ 4
f)	My parents think I will get better <grades> if I try harder in school.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

These items measure subjective norms toward school. Subjective norms represent social pressure to perform a behaviour. These particular items measure the social pressure to put forth effort in school. Research has demonstrated that subjective norms predict intentions which then predict behaviours.

Item b): **<pass my classes>** This term refers to completing a course with at least a minimum level of proficiency (as

opposed to failing a course and being forced to repeat it) and should be adapted to the national context.

Item f): **<grades>** This term refers to the teacher's standardized evaluation of student performance in a course or subject and should be adapted to the national context.

Adaptations to this question are a requirement. They need to be described in the Questionnaire Adaptation Spreadsheet and agreed between the NPM and the Consortium.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST91Q01-ST91Q06

ST91

Q **Thinking about your school: To what extent do you agree with the following statements?**

(Please tick only one box in each row.)

		Strongly agree	*Agree*	*Disagree*	*Strongly disagree*
a)	If I invest enough effort I can succeed in school.	☐ 1	☐ 2	☐ 3	☐ 4
b)	It is completely my choice whether or not I do well in school.	☐ 1	☐ 2	☐ 3	☐ 4
c)	Family demands or other problems prevent me from putting a lot of time into my school work.	☐ 1	☐ 2	☐ 3	☐ 4
d)	If I had different teachers, I would try harder in school.	☐ 1	☐ 2	☐ 3	☐ 4
e)	If I wanted to I could perform well in school.	☐ 1	☐ 2	☐ 3	☐ 4
f)	I perform poorly in school whether or not I study for my exams.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

These items measure perceived control toward putting forth effort into school. Perceived control represents the extent to which performing a behaviour is under one's control. Research has demonstrated that perceived control predicts intentions which then predict behaviours.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST92Q01-ST92Q06

ST92

Q **Thinking about your school: To what extent do you agree with the following statements?**

(Please tick only one box in each row.)

		Strongly agree	*Agree*	*Disagree*	*Strongly disagree*
a)	I intend to study every night for the remainder of the school year.	☐ 1	☐ 2	☐ 3	☐ 4
b)	I will turn in all of my homework on time for the remainder of the school year.	☐ 1	☐ 2	☐ 3	☐ 4
c)	I intend to set timelines to get projects done.	☐ 1	☐ 2	☐ 3	☐ 4
d)	I plan on studying harder in school this year than I did last year.	☐ 1	☐ 2	☐ 3	☐ 4
e)	I will arrive on time to my classes.	☐ 1	☐ 2	☐ 3	☐ 4
f)	I intend to work hard on every project to make sure everything is done right.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

These items measure student intentions to put forth effort in school. Research has demonstrated that intentions are the best predictor of behaviour.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

SECTION <F>: ABOUT YOUR PROBLEM SOLVING EXPERIENCES

ST93Q01-ST93Q11

ST93

Q **Thinking about yourself: How much like you are each of the statements below?**

(Please tick only one box in each row.)

	Very much like me	*Mostly like me*	*Somewhat like me*	*Not much like me*	*Not at all like me*
a) When confronted with a problem I give up easily.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
b) I put little time and effort into solving problem.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
c) I put off difficult problems.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
d) I remain interested in the tasks that I start.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
e) I stick with what I decide to do.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
f) I continue working on tasks until everything is perfect.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
g) When confronted with a problem I do more than what is expected of me.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
h) My interests change quickly.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
i) When confronted with a problem I am easily distracted.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

	Very much like me	*Mostly like me*	*Somewhat like me*	*Not much like me*	*Not at all like me*
j) I remain calm under pressure.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
k) Before I act, I plan.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

These items measure perseverance, an important facet of conscientiousness, which is one of the most well known predictors of achievement.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

Q **Thinking about yourself: How much like you are each of the statements below?**

(Please tick only one box in each row.)

		Very much like me	*Mostly like me*	*Somewhat like me*	*Not much like me*	*Not at all like me*
a)	I am happy when I learn something new.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
b)	I tend to analyse things.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
c)	I dislike learning.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
d)	I reason logically.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
e)	I can handle a lot of information.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
f)	I am quick to understand things.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
g)	I never challenge things.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
h)	I rarely look for a deeper meaning in things.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
i)	I seek explanations of things.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
j)	I can easily link facts together.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
k)	I have difficulty imagining things.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
l)	I look forward to the opportunity to learn and grow.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
m)	I like to speculate about things.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
n)	I like to solve complex problems.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
o)	I come up with alternatives.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

These items measure openness to experience, one of the personality variables in the well-validated Five Factor Model of personality that has been shown to be related to achievement.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST95Q01-ST95Q08

ST95

Q *You have just bought a new mobile phone. It works differently from your old one. You want to find out how to use it.*

What would you do? For each suggestion, check the option that best applies to you.

(Please tick only one box in each row.)

	I would definitely do this	*I would probably do this*	*I would probably not do this*	*I would definitely not do this*
a) I try to work out how to use the functions that I really need. Anything else doesn't matter.	☐ 1	☐ 2	☐ 3	☐ 4
b) I look for the games first.	☐ 1	☐ 2	☐ 3	☐ 4
c) I look up every menu and try out all the options.	☐ 1	☐ 2	☐ 3	☐ 4
d) I check how many buttons work the same way as my old phone.	☐ 1	☐ 2	☐ 3	☐ 4
e) I read the manual.	☐ 1	☐ 2	☐ 3	☐ 4
f) I search the internet.	☐ 1	☐ 2	☐ 3	☐ 4
g) I ask a friend for help.	☐ 1	☐ 2	☐ 3	☐ 4
h) I push a few buttons to see if there are familiar menus.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

This newly developed item is one of four problem solving vignettes in which three types of task are represented. Each of the three tasks covers a different situation that may arise in the course of solving a problem. The first question in each vignette focuses on getting acquainted with a new machine/ situation, the second focuses on one's initial response to a problem and the third focuses on possible approaches to take if one's initial response to the problem fails.

For each question, a range of possible responses is given to allow for differences in students' problem solving preferences. We anticipate that a factor analysis will reveal a number of factors to be represented by these options, based on initial results from a German pilot with 300 students finding at least a two factor solution. Once these factors have been examined, this information can be used to reduce the number of responses used in the Main Survey.

Each vignette can also be characterised by context (device or non-device) and situation (public or private). We have tried to represent the full range of different contexts/situations as this may give information about whether problem solving preferences are domain specific.

The purpose of these items is to gain information about student preferences towards different ways of dealing with certain real-life problems.

For this specific question, the type of task is using a personal device (namely, a mobile phone), and the question focuses on getting acquainted with the new machine.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST96Q01-ST96Q05

Q *Suppose that you have been sending text messages from your mobile phone for several weeks. Today, however, you can't send text messages. You want to try to solve the problem.*

What would you do? For each suggestion, check the option that best applies to you.

(Please tick only one box in each row.)

	I would definitely do this	*I would probably do this*	*I would probably not do this*	*I would definitely not do this*
a) I press every button possible to find out what is wrong.	☐ 1	☐ 2	☐ 3	☐ 4
b) I think about what might have happened and what I can do to solve the problem.	☐ 1	☐ 2	☐ 3	☐ 4
c) I read the manual.	☐ 1	☐ 2	☐ 3	☐ 4
d) I search the internet.	☐ 1	☐ 2	☐ 3	☐ 4
e) I ask a friend for help.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

For this specific question, the type of task is using a personal device (namely, a mobile phone), and the question focuses on the student's initial response to the problem.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST97Q01-ST97Q08

ST97

Q *After 15 minutes, you haven't found a solution to the problem. What would you do next?*

What would you do? For each suggestion, check the option that best applies to you.

(Please tick only one box in each row.)

	I would definitely do this	*I would probably do this*	*I would probably not do this*	*I would definitely not do this*
a) I keep on trying hard to solve the problem by myself.	☐ 1	☐ 2	☐ 3	☐ 4
b) I call the information line.	☐ 1	☐ 2	☐ 3	☐ 4
c) I ask my friends for help.	☐ 1	☐ 2	☐ 3	☐ 4
d) I search the internet.	☐ 1	☐ 2	☐ 3	☐ 4
e) I get it repaired in a shop.	☐ 1	☐ 2	☐ 3	☐ 4
f) I buy another mobile phone.	☐ 1	☐ 2	☐ 3	☐ 4
g) I read the manual.	☐ 1	☐ 2	☐ 3	☐ 4
h) I put it away and decide to try again later.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

For this specific question, the type of task is using a personal device (namely, a mobile phone), and the question focuses on possible approaches to take when the initial response to the problem fails.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST98Q01-ST98Q06

Q *You want to buy a cable to connect your computer to your TV. You don't know which cable to buy.*

What would you do? For each suggestion, check the option that best applies to you.

(Please tick only one box in each row.)

	I would definitely do this	*I would probably do this*	*I would probably not do this*	*I would definitely not do this*
a) I go to the nearest electronics store and ask the sales assistant.	☐ 1	☐ 2	☐ 3	☐ 4
b) I search the internet for how to connect computers to TVs.	☐ 1	☐ 2	☐ 3	☐ 4
c) I read the manual for my computer or my TV.	☐ 1	☐ 2	☐ 3	☐ 4
d) I ask a friend for help.	☐ 1	☐ 2	☐ 3	☐ 4
e) I go to the nearest electronics store and buy the one that I think is right.	☐ 1	☐ 2	☐ 3	☐ 4
f) I look at the sockets in my computer and my TV to work out what to buy.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

For this specific question, the type of task is the process of buying something related to technology, and the question focuses on getting acquainted with the new situation.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST99Q01-ST99Q05

ST99

Q *Suppose you know the right cable to connect your computer to your TV. You want to find an electronics store that sells cheap cables.*

What would you do? For each suggestion, check the option that best applies to you.

(Please tick only one box in each row.)

	I would definitely do this	*I would probably do this*	*I would probably not do this*	*I would definitely not do this*
a) I go to several stores and compare the advertised prices of the cables.	☐ 1	☐ 2	☐ 3	☐ 4
b) I search the internet for the locations of discount electronics stores.	☐ 1	☐ 2	☐ 3	☐ 4
c) I go to the nearest electronics store and ask the sales assistant for a good price.	☐ 1	☐ 2	☐ 3	☐ 4
d) I ask friends for their advice on how much I should pay.	☐ 1	☐ 2	☐ 3	☐ 4
e) I phone several electronics stores to ask how much they charge for the cable.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

For this specific question, the type of task is the process of buying something related to technology, and the question focuses on the student's initial response to the problem.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

Q *You try three discount electronics stores but none of them has the cable in stock.*

What would you do? For each suggestion, check the option that best applies to you.

(Please tick only one box in each row.)

	I would definitely do this	*I would probably do this*	*I would probably not do this*	*I would definitely not do this*
a) I try to find more discount electronic stores.	☐ 1	☐ 2	☐ 3	☐ 4
b) I try to think of other ways I could get a cable, or if I could use a different type of connection.	☐ 1	☐ 2	☐ 3	☐ 4
c) I go to a very expensive store that has the cable in stock.	☐ 1	☐ 2	☐ 3	☐ 4
d) I decide to try again another day.	☐ 1	☐ 2	☐ 3	☐ 4
e) I ask friends for their advice.	☐ 1	☐ 2	☐ 3	☐ 4
f) I order a cable from a discount store, with an estimated two weeks delivery time.	☐ 1	☐ 2	☐ 3	☐ 4
g) I decide not to connect my computer and my TV.	☐ 1	☐ 2	☐ 3	☐ 4
h) I phone several electronics stores to ask how much they charge for the cable.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

For this specific question, the type of task is the process of buying something related to technology, and the question focuses on possible approaches to take when the initial response to the problem fails.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST101Q01-ST101Q07

Q *You are planning a trip to a zoo with your brother. You don't know which route to take to get there.*

What would you do? For each suggestion, check the option that best applies to you.

(Please tick only one box in each row.)

	I would definitely do this	*I would probably do this*	*I would probably not do this*	*I would definitely not do this*
a) I read the zoo brochure to see if it says how to get there.	☐ 1	☐ 2	☐ 3	☐ 4
b) I study a map and work out the best alternative.	☐ 1	☐ 2	☐ 3	☐ 4
c) I leave it to my brother to worry about how to get there.	☐ 1	☐ 2	☐ 3	☐ 4
d) I ask a friend who has been there before for advice.	☐ 1	☐ 2	☐ 3	☐ 4
e) I know roughly where it is, so I suggest we just start driving.	☐ 1	☐ 2	☐ 3	☐ 4
f) I search the internet to get directions from home to the zoo.	☐ 1	☐ 2	☐ 3	☐ 4
g) I use a GPS car navigation system to find the quickest route.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

For this specific question, the type of task is planning in a non-technology setting, and the question focuses on getting acquainted with the new situation.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST102Q01-ST102Q06

ST102

Q *Suppose that your brother is driving and you are using a map to navigate to the zoo. When you think you are nearly there, you realise that you are lost.*

What would you do? For each suggestion, check the option that best applies to you.

(Please tick only one box in each row.)

	I would definitely do this	*I would probably do this*	*I would probably not do this*	*I would definitely not do this*
a) I ask my brother for help.	☐ 1	☐ 2	☐ 3	☐ 4
b) I think about where we might have made a wrong turn and how to get back on course.	☐ 1	☐ 2	☐ 3	☐ 4
c) I study the map to try to work out where we are.	☐ 1	☐ 2	☐ 3	☐ 4
d) I tell my brother to turn around and drive back until we find a road I know.	☐ 1	☐ 2	☐ 3	☐ 4
e) The zoo should be close by, so I suggest that we keep going to see if we can find it.	☐ 1	☐ 2	☐ 3	☐ 4
f) We stop and ask a pedestrian for help.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

For this specific question, the type of task is planning in a non-technology setting, and the question focuses on the student's initial response to the problem.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST103Q01-ST103Q06

ST103

Q *After 15 minutes, you have worked out where you are. You are a long way from the zoo and there doesn't seem to be an easy way to get there.*

What would you do? For each suggestion, check the option that best applies to you.

(Please tick only one box in each row.)

	I would definitely do this	*I would probably do this*	*I would probably not do this*	*I would definitely not do this*
a) I call my friend who has been there before to ask for help.	☐ 1	☐ 2	☐ 3	☐ 4
b) I keep on trying hard to work out the best way to get there.	☐ 1	☐ 2	☐ 3	☐ 4
c) I ask my brother what to do.	☐ 1	☐ 2	☐ 3	☐ 4
d) I suggest we find a <petrol> station.	☐ 1	☐ 2	☐ 3	☐ 4
e) I give up and ask my brother to drive us back home.	☐ 1	☐ 2	☐ 3	☐ 4
f) I look for another place we can visit that is easy to get to from where we are now.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

For this specific question, the type of task is planning in a non-technology setting, and the question focuses on possible approaches to take when the initial response to the problem fails.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST104Q01-ST104Q06

ST104

Q *You arrive at the train station. There is a ticket machine that you have never used before. You want to buy a ticket.*

What would you do? For each suggestion, check the option that best applies to you.

(Please tick only one box in each row.)

	I would definitely do this	*I would probably do this*	*I would probably not do this*	*I would definitely not do this*
a) I check how similar it is to other ticket machines I have used.	☐ 1	☐ 2	☐ 3	☐ 4
b) I watch how somebody else buys a ticket.	☐ 1	☐ 2	☐ 3	☐ 4
c) I carefully read the instructions on the machine.	☐ 1	☐ 2	☐ 3	☐ 4
d) I try out all the buttons to see what happens.	☐ 1	☐ 2	☐ 3	☐ 4
e) I ask someone for help.	☐ 1	☐ 2	☐ 3	☐ 4
f) I try to find a ticket office at the station to buy a ticket.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

For this specific question, the type of task is using a public device, and the question focuses on getting acquainted with the new machine.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST105Q01-ST105Q08

ST105

Q *Suppose that you have been buying train tickets from the ticket machine for several weeks. Today, however, the ticket machine doesn't seem to work. You need to buy a ticket.*

What would you do? For each suggestion, check the option that best applies to you.

(Please tick only one box in each row.)

	I would definitely do this	*I would probably do this*	*I would probably not do this*	*I would definitely not do this*
a) I press every button possible to find out what is wrong.	☐ 1	☐ 2	☐ 3	☐ 4
b) I think about what might cause this problem and what I can do to solve it.	☐ 1	☐ 2	☐ 3	☐ 4
c) I carefully read the display and the instructions on the machine.	☐ 1	☐ 2	☐ 3	☐ 4
d) I try to find another ticket machine.	☐ 1	☐ 2	☐ 3	☐ 4
e) I try to find a ticket office at the station to buy a ticket.	☐ 1	☐ 2	☐ 3	☐ 4
f) I ask someone for help.	☐ 1	☐ 2	☐ 3	☐ 4
g) I phone the customer service line.	☐ 1	☐ 2	☐ 3	☐ 4
h) I thump the machine to try to get it to work.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

For this specific question, the type of task is using a public device, and the question focuses on the student's initial response to the problem.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST106Q01-ST106Q09

Q *After 15 minutes, you haven't been able to buy a ticket and the train is due to arrive soon.*

What would you do? For each suggestion, check the option that best applies to you.

(Please tick only one box in each row.)

	I would definitely do this	*I would probably do this*	*I would probably not do this*	*I would definitely not do this*
a) I try to find a ticket office at the station to buy a ticket.	☐ 1	☐ 2	☐ 3	☐ 4
b) I keep on trying hard to get the machine to work.	☐ 1	☐ 2	☐ 3	☐ 4
c) I ask someone for help.	☐ 1	☐ 2	☐ 3	☐ 4
d) I carefully read the display and the instructions on the machine.	☐ 1	☐ 2	☐ 3	☐ 4
e) I get on the train without a ticket.	☐ 1	☐ 2	☐ 3	☐ 4
f) I thump the machine to try to get it to work.	☐ 1	☐ 2	☐ 3	☐ 4
g) I travel some other way.	☐ 1	☐ 2	☐ 3	☐ 4
h) I give up and go home.	☐ 1	☐ 2	☐ 3	☐ 4
i) I try to find another ticket machine.	☐ 1	☐ 2	☐ 3	☐ 4

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial.

For this specific question, the type of task is using a public device, and the question focuses on possible approaches to take when the initial response to the problem fails.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

NOTE 5

The questions that follow have to do with how you make decisions. You are given two to three choices. Your task is to decide between the choices. Choose the box that matches your preference.

ST107Q01

ST107

Q **You are given two choices to make money: Which do you prefer?**

(Please tick only one box.)

Accept <200 currency> ☐ 1

Flip a coin. If it comes up heads you get <500 currency>, if it is tails you get nothing. ☐ 2

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial. It is intended to find out to what extent students are averse to risk. It is hypothesised on the basis of research from general behavioural psychology that some financial behaviour is deeply-rooted and not amenable to intervention by educational or financial policy.

Item: For **<200 currency>** use an amount of money in your country's currency that would be enough to buy a modest laptop computer. The amount is intended to be enough to be interesting in itself to most students, but not an unimaginable amount of wealth. For **<500 currency>** use two and a half times the initial amount.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST108Q10

ST108

Q **You are given two choices to make money: Which do you prefer?**

(Please tick only one box.)

Accept <200 currency> ☐ 1

Flip a coin. If it comes up heads you get <400 currency>, if it is tails you get nothing. ☐ 2

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial. It is intended to find out to what extent students are averse to risk. It is hypothesised on the basis of research from general behavioural psychology that that some financial behaviour is deeply-rooted and not amenable to intervention by educational or financial policy.

Item: For **<200 currency>** use an amount of money in your country's currency that would be enough to buy a modest laptop computer. The amount is intended to be enough to be interesting in itself to most students, but not an unimaginable amount of wealth. For **<400 currency>** use two times the initial amount.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST109Q01

Q **You are given two choices to make money: Which do you prefer?**

(Please tick only one box.)

Accept <200 currency> ☐ 1

Flip a coin. If it comes up heads you get <350 currency>, if it is tails you get nothing. ☐ 2

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial. It is intended to find out to what extent students are averse to risk. It is hypothesised on the basis of research from general behavioural psychology that that some financial behaviour is deeply-rooted and not amenable to intervention by educational or financial policy.

Item: For **<200 currency>** use an amount of money in your country's currency that would be enough to buy a modest laptop computer. The amount is intended to be enough to be interesting in itself to most students, but not an unimaginable amount of wealth. For **<350 currency>** use one and three quarters of the initial amount.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST110Q01

ST110

Q **You are given two choices to make money: Which do you prefer?**

(Please tick only one box.)

Accept <200 currency> ☐ 1

Flip a coin. If it comes up heads you get <450 currency>, if it is tails you get nothing. ☐ 2

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial. It is intended to find out to what extent students are averse to risk. It is hypothesised on the basis of research from general behavioural psychology that that some financial behaviour is deeply-rooted and not amenable to intervention by educational or financial policy.

Item: For **<200 currency>** use an amount of money in your country's currency that would be enough to buy a modest laptop computer. The amount is intended to be enough to be interesting in itself to most students, but not an unimaginable amount of wealth. For **<450 currency>** use two and one quarter of the initial amount.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST111Q01

ST111

Q **You are given three choices to make money: Which do you prefer?**

(Please tick only one box.)

To get <200 currency> now ☐ 1

To get <250 currency> in 3 months ☐ 2

To get <300 currency> in 6 months ☐ 3

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial. It question is intended to find out to what extent students are time-sensitive: willing to trade immediate reward for greater gain at a future date. It is hypothesised on the basis of research from general behavioural psychology that that some financial behaviour is deeply-rooted and not amenable to intervention by educational or financial policy.

Item: For **<200 currency>** use an amount of money in your country's currency that would be enough to buy a modest laptop computer. The amount is intended to be enough to be appealing in itself to most students, but not an unimaginable amount of wealth. This should be the same amount as used in the first item of the previous question. For **<250 currency>** add one quarter to the original amount; for **<300 currency>** add one half to the original amount.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST112Q01

ST112

Q **You are given three choices to make money: Which do you prefer?**

(Please tick only one box.)

To get <200 currency> now ☐ 1

To get <250 currency> in 1 month ☐ 2

To get <300 currency> in 3 months ☐ 3

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial. It is intended to find out to what extent students are time sensitive: willing to trade immediate reward for greater gain at a future date. It is hypothesised on the basis of research from general behavioural psychology that that some financial behaviour is deeply-rooted and not amenable to intervention by educational or financial policy.

Item: For **<200 currency>** use an amount of money in your country's currency that would be enough to buy a modest laptop computer. The amount is intended to be enough to be appealing in itself to most students, but not an unimaginable amount of wealth. This should be the same amount as used in the first item of the previous question.. For **<250 currency>** add one quarter to the original amount; for **<300 currency>** add one half to the original amount.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST113Q01

Q **You are given three choices to make money: Which do you prefer?**

(Please tick only one box.)

To get <200 currency> now	☐ 1
To get <300 currency> in 1 month	☐ 2
To get <600 currency> in 3 months	☐ 3

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial. It is intended to find out to what extent students are time-sensitive: willing to trade immediate reward for greater gain at a future date. It is hypothesised on the basis of research from general behavioural psychology that that some financial behaviour is deeply-rooted and not amenable to intervention by educational or financial policy.

Item: For **<200 currency>** use an amount of money in your country's currency that would be enough to buy a modest laptop computer. The amount is intended to be enough to be appealing in itself to most students, but not an unimaginable amount of wealth. This should be the same amount as used in the first item of the previous question. For **<300 currency>** add one half to the original amount; **<600 currency>** represents three times the original amount.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

ST114Q01

ST114

Q **You are given three choices to make money: Which do you prefer?**

(Please tick only one box.)

To get <200 currency> now ☐ 1

To get <300 currency> in 3 months ☐ 2

To get <600 currency> in 6 months ☐ 3

Notes for National Project Manager:

This question is new in the PISA 2012 Field Trial. It is intended to find out to what extent students are time-sensitive: willing to trade immediate reward for greater gain at a future date. It is hypothesised on the basis of research from general behavioural psychology that that some financial behaviour is deeply-rooted and not amenable to intervention by educational or financial policy.

Item: For **<200 currency>** use an amount of money in your country's currency that would be enough to buy a modest laptop computer. The amount is intended to be enough to be appealing in itself to most students, but not an unimaginable amount of wealth. This should be the same amount as used in the first item of the previous question. For **<300 currency>** add one half to the original amount; **<600 currency>** represents three times the original amount.

Notes for Translator:

This question is new in the PISA 2012 Field Trial.

Thank you very much for your co-operation in completing this questionnaire!