OECD Program for International Student Assessment 2012

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

Project Consortium

- Australian Council for Educational Research (ACER)
- cApStAn Linguistic Quality Control (Belgium)
- Deutsches Institut für Internationale Pädagogische Forschung (DIPF, Germany)
- Educational Testing Service (ETS, USA)
- Institutt for Lærerutdanning og Skoleutvikling (ILS, Norway)
- Leibniz - Institute for Science and Mathematics Education (IPN, Germany)
- National Institute for Educational Policy Research (NIER, Japan)
- The Tao Initiative: CRP - Henri Tudor and Université de Luxembourg EMACS (Luxembourg)
- Unité d'analyse des systèmes et des pratiques d'enseignement (aSPe, Belgium)
- Westat (USA)

USA

Date of Test (Field Trial PISA 2012)

Day | Month | 2011

Student Questionnaire - Form A

Place Label Here

Student ID

Participation Status

English 313

U.S. participation in this study is sponsored by the National Center for Education Statistics (NCES), U.S. Department of Education. Your responses are protected by federal statute (20 U.S.C., § 9573). Your answers may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law. By law, everyone working on this NCES survey is subject to a jail term of up to 5 years, a fine of up to $250,000, or both if he or she willfully discloses ANY identifiable information about you.

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless such collection displays a valid OMB control number. The valid OMB control number for this voluntary information collection is 1850-0755. The time required to complete this information collection is estimated to average 30 minutes per response, including the time to review instructions, search existing data resources, gather the data needed, and complete and review the information collection. If you have any comments concerning the accuracy of the time estimate(s) or suggestions for improving the form, please write to: U.S. Department of Education, Washington, D.C. 20202-4537. If you have comments or concerns regarding the status of your individual submission of this form, write directly to: Program for International Student Assessment (PISA), National Center for Education Statistics, U.S. Department of Education, 1990 K Street, N.W., Washington, D.C. 20006-5650.

O.M.B. No. 1850-0755, Approval Expires xx/xx/xxxx.

In this booklet you will find questions about:

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

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

If you make a mistake when checking 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 information (or responses) you provide may only be used for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law [Education Sciences Reform Act of 2002 (ESRA 2002), 20 U.S. Code, Section 9573]

SECTION A: ABOUT YOU

ST01

Q1 What grade are you in?

_____

grade

ST03

Q2 When were you born?

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

_____ _____ *19*___

Month *Day* *Year*

ST04

Q3 Are you female or male?

Female ☐ 1

Male ☐ 2

Q4 Which best describes you?

(Please check only one box.)

I am Hispanic or Latino. ☐ 1

I am <u>not</u> Hispanic or Latino. ☐ 1

Q5 Which of these categories best describes your race?

(Please check one or more boxes.)

White ☐ 1

Black or African American ☐ 1

Asian ☐ 1

American Indian or Alaska Native ☐ 1

Native Hawaiian or Other Pacific Islander ☐ 1

ST05

Q6 Did you attend pre-school?

No ☐ 1

Yes, for one year or less ☐ 2

Yes, for more than one year ☐ 3

Q7 Did you attend kindergarten?

No ☐ 1

Yes ☐ 1

ST06

Q8 How old were you when you started first grade?

_____ *Years*

ST07

Q9 Have you ever repeated a grade?

(Please check only one box in each row.)

	No, never	*Yes, once*	*Yes, twice or more*
a) In kindergarten	☐ 1	☐ 2	☐ 3
b) In grades 1-6	☐ 1	☐ 2	☐ 3
c) In grades 7-9	☐ 1	☐ 2	☐ 3
d) In grades 10-12	☐ 1	☐ 2	☐ 3

ST08

Q10 In the last two full weeks you were in school, how many times did you arrive late for school?

(Please check only one box.)

None ☐ 1

One or two times ☐ 2

Three or four times ☐ 3

Five or more times ☐ 4

ST09

Q11 In the last two full weeks of school, how many times did you skip school?

(Please check only one box.)

None ☐ 1

One or two times ☐ 2

Three or four times ☐ 3

Five or more times ☐ 4

Q12 In the last two full weeks of school, how many times did you miss school because of illness or other circumstances?

(Please check only one box.)

None ☐ 1

One or two times ☐ 2

Three or four times ☐ 3

Five or more times ☐ 4

Q13 What is the highest grade or level of school you expect to complete?

(Please check only one box.)

- Less than high school ☐ 1
- High school ☐ 2
- Vocational or technical certificate (such as cosmetology or auto mechanics) ☐ 3
- Associate's degree (2-year degree from a community college) ☐ 4
- Bachelor's degree (4-year college degree) ☐ 5
- Master's degree ☐ 6
- Doctoral or professional degree such as medicine or law ☐ 7

SECTION B: ABOUT YOUR FAMILY AND HOME

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.

ST11

Q14 Who usually lives at home with you?

(Please check 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

Q15a What is your mother's main job? (e.g., school teacher, cook, sales manager)

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

Please write in the job title. _____

Q15b What does your mother do in her main job? (e.g., teaches high school students, helps 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.

_____

ST13

Q16 What is the highest level of schooling (not including college) completed by your mother?

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

(Please check only one box.)

- She completed grade 12 (high school diploma or GED) ☐ 1
- She completed grade 9 ☐ 2
- She completed grade 6 ☐ 3
- She did not complete grade 6 ☐ 4

ST14

Q17 Does your mother have any of the following degrees, certificates, or diplomas?

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

(Please check one box in each row.)

		Yes	*No*
a)	Master's, doctoral, or professional degree such as medicine or law	☐ 1	☐ 2
b)	Bachelor's degree (4-year college degree)	☐ 1	☐ 2
c)	Associate's degree (2-year degree from a community college)	☐ 1	☐ 2
d)	Vocational or technical certificate/diploma after high school (such as cosmetology or auto mechanics)	☐ 1	☐ 2

Q18 What is your mother currently doing?

(Please check 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

Q19a What is your father's main job? (e.g., school teacher, cook, sales manager)

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

Please write in the job title. _____

Q19b What does your father do in his main job? (e.g., teaches high school students, helps 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.

_____

Q20 What is the highest level of schooling (not including college) completed by your father?

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

(Please check only one box.)

- He completed grade 12 (high school diploma or GED) ☐ 1
- He completed grade 9 ☐ 2
- He completed grade 6 ☐ 3
- He did not complete grade 6 ☐ 4

ST18

Q21 Does your father have any of the following degrees, certificates or diplomas?

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

(Please check one box in each row.)

		Yes	*No*
a)	Master's, doctoral, or professional degree such as medicine or law	☐ 1	☐ 2
b)	Bachelor's degree (4-year college degree)	☐ 1	☐ 2
c)	Associate's degree (2-year degree from a community college)	☐ 1	☐ 2
d)	Vocational or technical certificate/diploma after high school (such as cosmetology or auto mechanics)	☐ 1	☐ 2

ST19

Q22 What is your father currently doing?

(Please check 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

ST20

Q23 In what country were you and your parents born?

(Please check one box in each column.)

	You	*Mother*	*Father*
United States*	☐ 01	☐ 01	☐ 01
Other country	☐ 02	☐ 02	☐ 02

*NOTE: the "United States" refers to the 50 states, District of Columbia, and U.S. military bases abroad.

ST21

Q24 If <u>you</u> were NOT born in the United States how old were you when you arrived in the United States?

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

If you were born in the United States please skip this question and go to Q 25.

_____ *Years*

ST25

Q26 What language do you speak at home most of the time?

(Please check only one box.)

English ☐ 313

Spanish ☐ 156

Other language ☐ 859

Q27 Which of the following are in your home?

(Please check 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 or manuals	☐ 1	☐ 2
l) A dictionary	☐ 1	☐ 2
m) A dishwasher	☐ 1	☐ 2
n) A DVD player	☐ 1	☐ 2
o) A guest room	☐ 1	☐ 2
p) A high-speed Internet connection	☐ 1	☐ 2
q) A musical instrument	☐ 1	☐ 2

Q28 How many of these are there at your home?

(Please check only one box in each row.)

	None	*One*	*Two*	*Three or more*
a) Cell phones	☐	☐	☐	☐ 4
b) Televisions	☐	☐	☐	☐ 4
c) Computers	☐	☐	☐	☐ 4
d) Cars	☐	☐	☐	☐ 4
e) Bathrooms with a bathtub or shower	☐	☐	☐	☐ 4

Q29 How many books are there in your home?

There are usually about 15 books per foot of shelving. Do not include magazines, newspapers, or your schoolbooks.

(Please check 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

SECTION C: ABOUT LEARNING MATHEMATICS

ST29

Q30 Thinking about your views on mathematics: To what extent do you agree with the following statements?

(Please check 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.	☐ 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

Q31 Please read the paragraph below. Then, indicate for each of the explanations that follow how likely it is to apply to 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 check only one box in each row.)

	Very likely	*Likely*	*Unlikely*	*Very unlikely*
a) I think 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 think that it is more important for me to get better grades in mathematics than to go out with my friends.	☐ 1	☐ 2	☐ 3	☐ 4

Q32 Please read the paragraph below. Then, indicate for each of the explanations that follow how likely it is to apply to 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 check 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

Q33 Please read the paragraph below. Then, indicate for each of the explanations that follow how likely it is to apply to 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 this?

(Please check only one box in each row.)

	Very likely	*Likely*	*Unlikely*	*Very unlikely*
a) My parents encouraged me to join the club.	☐ 1	☐ 2	☐ 3	☐ 4
b) I want to get the highest grade in all of my mathematics classes.	☐ 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

Q34 Please read the sentence below. Then, indicate for each of the explanations that follow how likely it is to apply to you, given the situation.

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

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

(Please check 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

Q35 Please read the paragraph below. Then, indicate for each of the explanations that follow how likely it is to apply to 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, English, foreign languages, and history combined.

How likely are the following reasons that you do this?

(Please check 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

Q36 Thinking about how people important to you view mathematics: How strongly do you agree with the following statements*?*

(Please check 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 at 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

Q37 Thinking about your friends: To what extent do you agree with the following statements?

(Please check 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

Q38 How confident do you feel about having to do the following mathematics tasks?

(Please check only one box in each row.)

	Very confident	*Confident*	*Not very confident*	*Not at all confident*
a) Using a train schedule to figure 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 feet of tile 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 gas mileage of a car.	☐ 1	☐ 2	☐ 3	☐ 4

Q39 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 checking one of the boxes numbered 1 to 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.

Q40 To what extent do you agree with the following statements?

(Please check 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

Q41 To what extent do you agree with the following statements?

(Please check 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

Q42 Here we briefly describe some students. Please read each description and check the box on each line that shows how much each student is like you.

(Please check 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

Q43 Thinking about studying mathematics: To what extent do you agree with the following statements?

(Please check 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

Q44 Thinking about your mathematics lessons: To what extent do you agree with the following statements?

(Please check 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

Q45 You are a student in the following situation:

Each week, your mathematics teacher 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 check 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

Q46 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 check 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

Q47 Thinking about the mathematics you do for school: To what extent do you agree with the following statements?

(Please check only one box in each row.)

	Strongly agree	*Agree*	*Disagree*	*Strongly disagree*
a) I have my homework finished 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

Q48 Thinking about your views on mathematics: To what extent do you agree with the following statements?

(Please check 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

Q49 For each pair of statements, please choose the item that best describes you.

(Please check only one box in each row.)

a)	I intend to take additional mathematics courses after school finishes.	☐ 1	I intend to take additional English 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 English 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

Q50 How often do you do the following things inside and outside school?

(Please check 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

Q51 Thinking about your mathematics classes: To what extent do you agree with the following statements?

(Please check 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 on 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 class.	☐ 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

Q52 For each pair of items, please choose the one that best describes you.

(Please check 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 on 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

Q53 There are different ways of studying mathematics: To what extent do you agree with the following statements?

(Please check only one box in each row.)

	Strongly agree	*Agree*	*Disagree*	*Strongly disagree*
a) When I study for a mathematics test, I try to figure 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 about how the mathematics I have learned can be used in everyday	☐ 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 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 learned in other subjects.	☐ 1	☐ 2	☐ 3	☐ 4

Q54 For each group of three items, please choose the item that best describes your approach to mathematics.

(Please check 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 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 learned 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 about how the mathematics I have learned 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

Q55 Thinking about your views on mathematics: To what extent do you agree with the following statements?

(Please check 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 questions 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

Q56 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 extra time studying outside of normal school hours. The lessons may be given at your school, at your home, or somewhere else.

(Please check 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) English	☐ 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

Q57 For those subjects in which you attend out-of-school lessons, please indicate whether these lessons 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 check only one box in each row.)

	Remedial lessons	*Enrichment lessons*	*Not applicable*
a) English	☐ 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

Q58 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 material assigned 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) Practice content from school lessons by working on a computer (e.g., learn vocabulary with training software) _____ *hours per week*

Q59 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 material assigned 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) Practice content from school lessons by working on a computer (e.g., practice mathematics using online software) _____ *hours per week*

ST59

Q60 What grade did you receive in the following subjects both on your last report card 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 grade.

	Last report card	*Last school you attended*
a) English	_____	_____
b) Mathematics	_____	_____
c) Science	_____	_____

ST60

Q61 On your last report card, how did your grade compare with the passing grade 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 grade.

(Please check only one box on each row.)

	Above the passing grade	*At the passing grade*	*Below the passing grade*
a) English	☐ 1	☐ 2	☐ 3
b) Mathematics	☐ 1	☐ 2	☐ 3
c) Science	☐ 1	☐ 2	☐ 3

Q62 Have you been taught to do the following types of mathematics tasks during your time in school?

(Please check only one box on each row.)

	Frequently	*Sometimes*	*Rarely*	*Never*
a) Using a train schedule, figuring out 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 meters of tile 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

Q63 Thinking about mathematical concepts: How familiar are you with the following terms?

(Please check only one box in each row.)

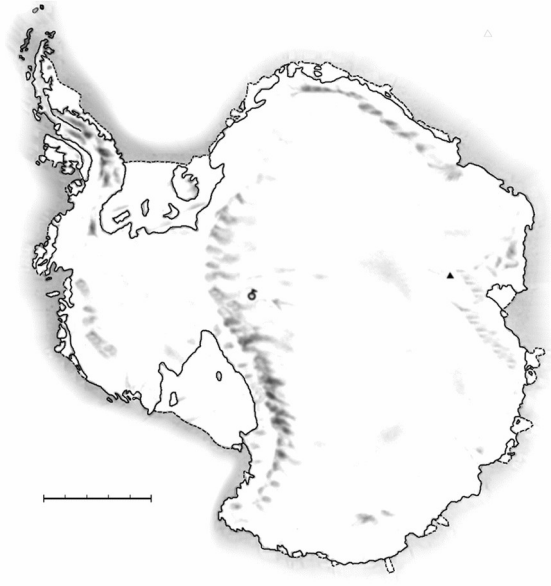
	Never heard of it	*Heard of it once or twice*	*Heard of it a few times*	*Heard of it often*	*Know it well, understand the concept*
a) Exponential Function	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
b) Divisor	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
c) Quadratic Function	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
d) Proper Number	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
e) Pythagorean Theorem	☐ 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

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 of the problems. You do NOT need to solve them.

Q64 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.

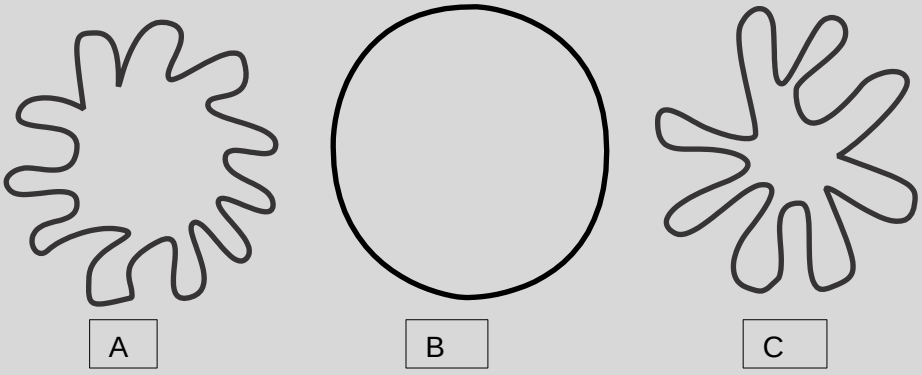
Show your work and explain how you made your estimate. (You can draw over the map if it helps you with your estimation).

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

(Please check 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

Q65 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!

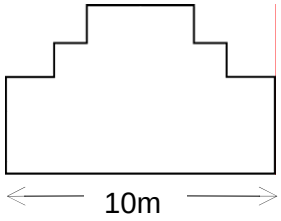
(Please check only one box in each row.)

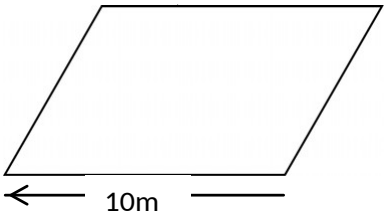
		Frequently	*Sometimes*	*Rarely*	*Never*
a)	How often have you encountered this type of problem in your **mathematics lessons**?	☐ 1	☐ 2	☐ 3	☐ 4
b)	How often have you encountered this type of problem in the **tests you have taken in school?**	☐ 1	☐ 2	☐ 3	☐ 4

Q66 Read the problem in the box below. Then, answer the questions that follow it.

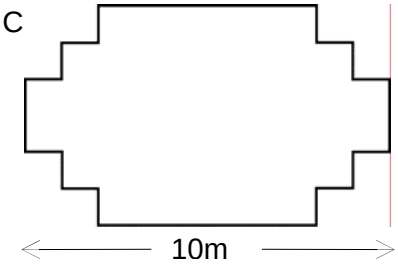
A carpenter has 32 meters of timber and wants to make a border around a garden bed. He is considering the following designs for the garden bed.

A

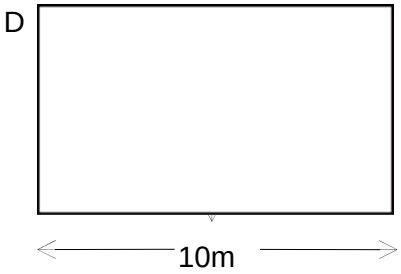




C



D



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

Garden bed design	Using this design, can the garden bed be made with 32 meters 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 check 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

Q67 Read the problem in the box below. Then, answer the questions that follow it.

A woman in the 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 8:00 until 11:00.

Time	**8:00**	**9:00**	**10:00**
Penicillin (mg)	**300**		

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

(Please check 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

Q68 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 to Mei-Ling's advantage 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!

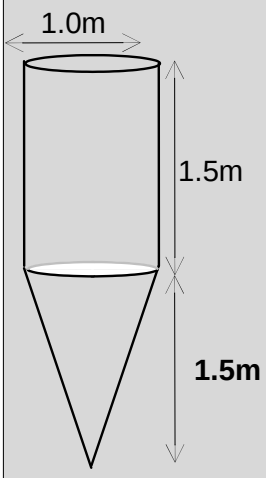
(Please check only one box in each row.)

		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

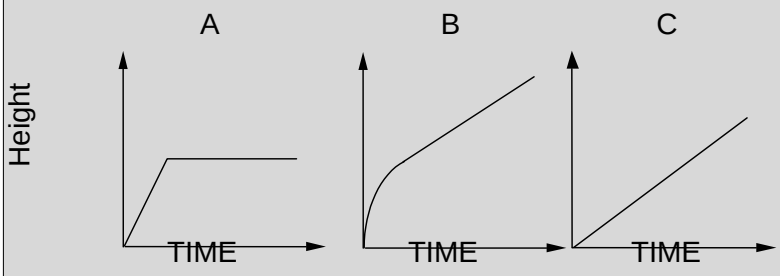
Q69 Read the problem in the box below. Then, answer the questions that follow it.

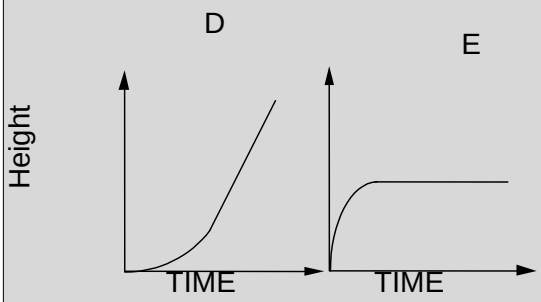
A water tank has the shape and dimensions as shown in the diagram.

At the beginning, the tank is empty. Then it is filled with water at the rate of one liter 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 check 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

ST69

Q70 How many minutes, on average, are there in a class period for the following subjects?

a) Minutes in a class period in English: _____ *Minutes*

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

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

ST70

Q71 How many class periods per week do you typically have for the following subjects?

a) Number of class periods per week in English: _____ *class periods*

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

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

ST71

Q72 In a normal, full week at school, how many class periods do you have in total?

Number of **ALL** class periods _____ *class periods*

ST72

Q73 On average, about how many students attend your English class?

_____ *students*

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

Please read each of the problems. You do NOT need to solve them.

Q74 *In the box is a series of problems. Each requires 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 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

Q75 *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.

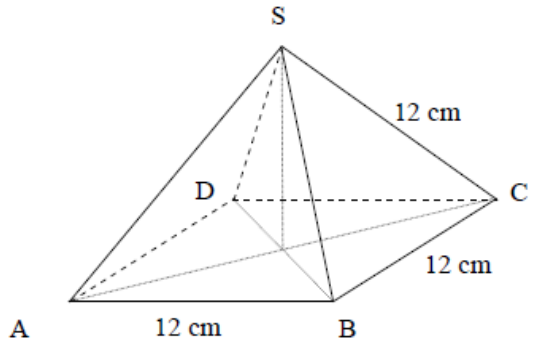
We want to know about your experience with these types of items in school. Do not solve it!

(Please 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

Q76 *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!

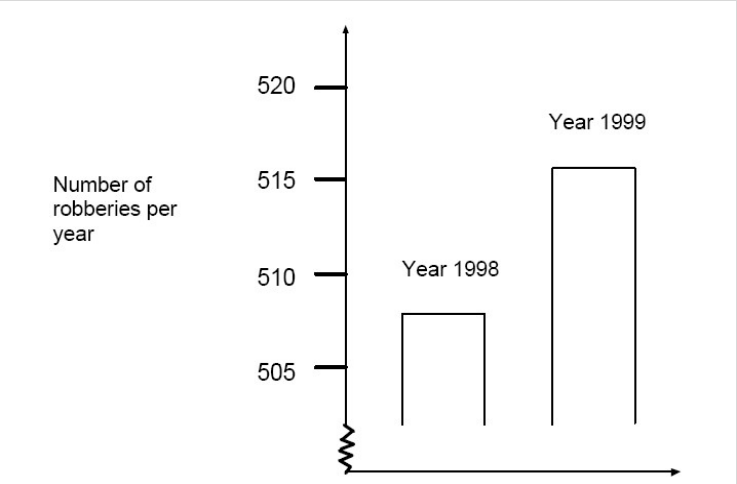
(Please check only one box in each row.)

		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

Q77 *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

SECTION D: ABOUT YOUR MATHEMATICS EXPERIENCES

ST77

Q78 How often do these things happen in your mathematics classes?

(Please check only one box in each row.)

	Every class	*Most classes*	*Some classes*	*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

Q79 How often do these things happen with your mathematics homework?

(Please check 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

Q80 Thinking about the mathematics teacher that taught your last mathematics class: How often do these things happen?

(Please check 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 workbooks.	☐ 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

Q81 Thinking about the mathematics teacher that taught your last mathematics class: To what extent do you agree with the following statements?

(Please check 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 only involve calculations.	☐ 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

Q82 How often do these things happen in your mathematics classes?

(Please check only one box in each row.)

	Every class	*Most classes*	*Some classes*	*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

Q83 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 check only one box in each row.)

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

Q84 Thinking about the mathematics teacher who taught your last mathematics class: To what extent do you agree with the following statements?

(Please check only one box in each row.)

	Strongly agree	*Agree*	*Disagree*	*Strongly disagree*
a) My teacher lets students 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

Q85 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 check only one box in each row.)

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

Q86 Thinking about the mathematics teacher who taught your last mathematics class: To what extent do you agree with the following statements?

(Please check 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 the class period on time.	☐ 1	☐ 2	☐ 3	☐ 4
d) The teacher has to wait a long time for students to quiet down.	☐ 1	☐ 2	☐ 3	☐ 4

SECTION E: ABOUT YOUR SCHOOL

ST86

Q87 Thinking about the teachers at your school: To what extent do you agree with the following statements?

(Please check 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

Q88 Thinking about your school: To what extent do you agree with the following statements?

(Please check 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

Q89 Thinking about what you have learned in school*:* To what extent do you agree with the following statements?

(Please check 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

Q90 Thinking about your school: To what extent do you agree with the following statements?

(Please check 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

Q91 Thinking about how others view your school: To what extent do you agree with the following statements?

(Please check 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

Q92 Thinking about your school: To what extent do you agree with the following statements?

(Please check 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

Q93 Thinking about your school: To what extent do you agree with the following statements?

(Please check 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

SECTION F: ABOUT YOUR PROBLEM SOLVING EXPERIENCES

ST93

Q94 Thinking about yourself: How much like you are each of the statements below?

(Please check 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 problems.	☐ 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	*Mostly like me*	*Somewhat like me*	*Not much*	*Not at all like*

	like me			*like me*	*me*
j) I remain calm under pressure.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
k) Before I act, I plan.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

Q95 Thinking about yourself: How much like you are each of the statements below?

(Please check 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 analyze 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 for 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

Q96 *You have just bought a new cell 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 check 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 figure 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 open 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

Q97 *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 check 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

Q98 *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 check 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 technical support 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 cell 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

Q99 *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 check 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 on my computer and my TV to figure out what to buy.	☐ 1	☐ 2	☐ 3	☐ 4

Q100 *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 check 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

Q101 *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 check 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

Q102 *You are planning a trip to the 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 check 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 figure out the best route.	☐ 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

Q103 *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 realize that you are lost.*

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

(Please check 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 figure 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

Q104 *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 check 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 figure 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 gas 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

Q105 *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 check 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

Q106 *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 check 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 hit the machine to try to get it to work.	☐ 1	☐ 2	☐ 3	☐ 4

Q107 *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 check 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 hit 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

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.

ST107

Q108 You are given two choices to make money: Which do you prefer?

(Please check only one box.)

Accept $400 ☐ 1

Flip a coin. If it comes up heads you get $900; if it comes up tails you get nothing. ☐ 2

ST108

Q109 You are given two choices to make money: Which do you prefer?

(Please check only one box.)

Accept $400 ☐ 1

Flip a coin. If it comes up heads you get $900; if it comes up tails you get nothing. ☐ 2

ST109

Q110 You are given two choices to make money: Which do you prefer?

(Please check only one box.)

Accept $400 ☐ 1

Flip a coin. If it comes up heads you get $600; if it comes up tails you get nothing. ☐ 2

ST110

Q111 You are given two choices to make money: Which do you prefer?

(Please check only one box.)

Accept $400 ☐ 1

Flip a coin. If it comes up heads you get $900; if it comes up tails you get nothing. ☐ 2

ST111

Q112 You are given three choices to make money: Which do you prefer?

(Please check only one box.)

To get $400 now ☐ 1

To get $500 in 3 months ☐ 2

To get $600 in 6 months ☐ 3

ST112

Q113 You are given three choices to make money: Which do you prefer?

(Please check only one box.)

To get $400 now ☐ 1

To get $500 in 1 month ☐ 2

To get $600 in 3 months ☐ 3

ST113

Q114 You are given three choices to make money: Which do you prefer?

(Please check only one box.)

To get $400 now ☐ 1

To get $600 in 1 month ☐ 2

To get $1,800 in 3 months ☐ 3

Q115 You are given three choices to make money: Which do you prefer?

(Please check only one box.)

To get $400 now ☐ 1

To get $600 in 3 months ☐ 2

To get $1,800 in 6 months ☐ 3

Thank you very much for your cooperation in completing this questionnaire!