

National Survey of Algebra Teachers

Sponsored by:

The U.S. Department of Education
National Mathematics Advisory Panel

Conducted by:

NORC
at the University of Chicago

The National Survey of Algebra Teachers seeks to obtain information from Algebra I teachers about their views on students' preparation, curriculum and instruction.

Participation of teachers is voluntary and no negative consequences will attend a decision not to participate. Responses to this data collection will be used only for statistical purposes. The reports prepared for this study will summarize findings across the sample and will not associate responses with a specific district, school, or individual. We will not provide information that identifies you or your district to anyone outside the study team, except as required by law.

- Thank you for taking the time to complete this questionnaire. You may use either pen or pencil
- Please clearly circle your answers
- If you need to change an answer, please make sure the old answer is either completely erased or clearly crossed out.

The time required to complete this form varies according to individual circumstances, but the average time is estimated to be 25 minutes. If you have any comments regarding this time estimate, please write to: U.S. Department of Education, Washington, D.C. 20202-4651. If you have any specific questions or comments regarding this study, please contact Lekha Venkataraman at 1-866-696-4580.

OMB No: XXXXXXXX—Approval is Pending

Section 1: Your Algebra I Class

In this section of the survey we would like for you to report on ONE specific class, which we will call your Target Class. When you see this referred to in a question, please report on this ONE class, even if it is not typical of the Algebra I classes you teach.

How to determine your Target Class

Your Target Class is the first Algebra I class you teach on Mondays. If you do not teach an Algebra I class on Monday, your Target Class is the first Algebra I class you teach on the following day.

Please answer the following questions regarding your Target Class.

1. How many students are in your Target Class?

1	2	3	4	5	6
Less than 15 students	15-20 students	21-25 students	26-30 students	31-35 students	More than 35 students

2. How many of the students in your Target Class: *(Please circle one for each line)*

	None	Some	About half	Most	Nearly all
2a. Are in the 7th grade	0	1	2	3	4
2b. Are in the 8th grade	0	1	2	3	4
2c. Are in the 9th grade	0	1	2	3	4
2d. Are in the 10th grade	0	1	2	3	4
2e. Are in the 11th grade	0	1	2	3	4
2f. Are in the 12th grade	0	1	2	3	4
2g. Are in special education (i.e., have an IEP)	0	1	2	3	4
2h. Are currently enrolled in your school's bilingual program	0	1	2	3	4

3. How many students in your Target Class: *(Circle one per line)*

	None	Some	About half	Most	Nearly all
3a. Come to class on time	0	1	2	3	4
3b. Attend class regularly	0	1	2	3	4
3c. Come to class prepared with appropriate supplies and books	0	1	2	3	4
3d. Create serious behavior problems in your class	0	1	2	3	4
3e. Regularly pay attention in class	0	1	2	3	4
3f. Actively participate in class activities	0	1	2	3	4
3g. Take notes	0	1	2	3	4
3h. Have serious difficulties reading English	0	1	2	3	4
3i. Care about what grade they receive	0	1	2	3	4

4. Based on your experience with in-coming Algebra I students in your Target Class, how would you rate students' background in each of the following areas of mathematics? (Please circle one for each line)

	Excellent	Good	Fair	Poor
4a. Whole numbers and operations with whole numbers	1	2	3	4
4b. Positive and negative integers and operations with positive and negative integers	1	2	3	4
4c. Rational numbers and operations involving fractions and decimals	1	2	3	4
4d. Ratios, percents, rates, and proportions.	1	2	3	4
4e. Solving word problems	1	2	3	4
4f. The concept of variables	1	2	3	4
4g. Manipulation of variables	1	2	3	4
4h. Solving simple linear equations and inequalities	1	2	3	4
4i. Plotting points, and graphing lines on the 4 quadrant coordinate plane	1	2	3	4
4j. Measurement formulas of basic geometric shapes	1	2	3	4
4k. Basic study skills and work habits necessary for success in math	1	2	3	4
4l. Computation skills	1	2	3	4
4m. Ability to use math in contexts that are identified as real world situations	1	2	3	4
4n. Working independently	1	2	3	4
4o. Working cooperatively with other students	1	2	3	4

5. On average, how often do you use the following instructional materials and tools in your Target Class? (Circle one on each line)

	Never	Less than once a week	About once a week	Several times a week	Everyday
5a. Textbooks	0	1	2	3	4
5b. Printed instructional materials other than textbooks	0	1	2	3	4
5c. Teacher/colleague written instructional materials	0	1	2	3	4
5d. Graphing calculators (the school's or their own)	0	1	2	3	4
5e. Physical objects ("manipulatives")	0	1	2	3	4
5f. Computer-based instructional tools (software)	0	1	2	3	4

6. Please indicate your level of agreement or disagreement with the statement “Computer-based instructional tools (software) are helping Algebra I students in my Target Class.” (check one)

1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree

7. What is the name of the textbook you primarily use in your Algebra I Target Class? If you do not use a textbook please write N/A in the space provided.

7a. Title

7b. Author

7c. Publisher

7d. Date of Publication

8. Please indicate your level of agreement or disagreement with each of the following statements regarding the Algebra I textbook you use in your Target Class.

	Strongly Agree	Agree	No Opinion	Disagree	Strongly disagree
8a. The textbook includes the appropriate topics and content to teach the course	1	2	3	4	5
8b. The textbook appropriately sequences math concepts	1	2	3	4	5
8c. The textbook provides examples and lessons that are focused directly on the mathematics involved and that explain concepts clearly	1	2	3	4	5
8d. The textbook provides opportunities for the development of problem-solving skills	1	2	3	4	5
8e. The textbook provides adequate practice for each topic covered	1	2	3	4	5
8f. The textbook and the supporting materials which come with it, provide the right mix of useful suggestions and problems for homework assignments	1	2	3	4	5
8g. The textbook provides adequate supplementary/support materials	1	2	3	4	5
8h. The textbook is clearly focused on Algebra I and contains very few if any distractions to the instructional focus (e.g. off task activities, pictures with no sense of purpose, etc.)	1	2	3	4	5
8i. The textbook and the accompanying materials provide useful suggestions for meeting the needs of diverse learners.	1	2	3	4	5

9. About what percentage of your current Algebra I students in your Target Class do you anticipate will fail your course? (check one)

- 1 None 2 1-10 % 3 11-20% 4 21-30% 5 31-40% 6 41-50% 7 More than 50% 8 No answer

10. On average, about how much time per day do you expect your Algebra I students in your Target Class to spend on assignments outside of class? (check one)

- 1 None 2 1-15 mins 3 16-30 mins 4 31-45 mins 5 46-60 mins 6 More than 60 mins 7 No answer

11. On average, about how many of your Algebra I students in your Target Class complete their outside-of-class assignments?" (check one)

- 1 All or almost all 2 About two-thirds 3 About one-third 4 None or almost none 5 Not applicable/ no homework

12. On average how many minutes per week does your Algebra I Target Class meet?

(FILL IN MINUTES)

13. Does your Algebra I Target Class meet everyday?

- 1 Yes 2 No

14. How long is each period during which you teach Algebra I?

(FILL IN MINUTES)

15. Is this enough instructional time to adequately teach Algebra I to your Target Class?

- 1 Yes 2 No

Section 2: Your School and Algebra I

1. Below is a list of factors that may cause problems in Algebra I instruction. For each factor, please indicate whether it is not a problem, a minor problem, a moderate problem or a serious problem in your school. (Circle one on each line)

	Not a problem	Minor problem	Moderate problem	Serious problem
1a. Insufficient access to computers	1	2	3	4
1b. Inadequate access to graphing calculators	1	2	3	4
1c. Poor quality or out-of-date textbooks	1	2	3	4
1d. Class sizes are too large	1	2	3	4
1e. Too little coordination or articulation between classes in the mathematics curriculum	1	2	3	4
1f. Some teachers are inadequately prepared to teach Algebra I	1	2	3	4
1g. Lack of teacher planning time	1	2	3	4
1h. Students with different abilities and interests taking the same math classes	1	2	3	4
1i. Too little parent/family support	1	2	3	4
1j. Inadequate opportunities for professional learning	1	2	3	4
1k. Inadequate administrative support	1	2	3	4

2. Does your school offer different levels of Algebra I to groups of students based on ability?

1 Yes 2 No 3 Don't know

3. How many CLASS PERIODS do you teach a WEEK? (Exclude study halls and homeroom periods.)

(Please enter a number)

4. Is your Algebra I class part of block scheduling at your school?

1 Yes 2 No

5. On average, how many minutes are you scheduled during the school day to prepare for classes?

(FILL IN MINUTES)

6. On average how much time do you spend outside of the regular school day preparing for your Algebra I classes?

(FILL IN MINUTES)

7. To what grades are you currently teaching Algebra I? (Circle all that apply)

- 1 7th grade 2 8th grade 3 9th grade 4 10th grade 5 11th grade 6 12th grade 7 Special Education

8. How do you rate the remedial help in your school for students who are struggling in Algebra I? (Circle one for each line)

	Excellent	Good	Fair	Poor
8a. Availability of tutoring or other remedial assistance	1	2	3	4
8b. Quality of tutoring or other remedial assistance	1	2	3	4

Section 3: Your Views of Mathematics Education

1. How important is a solid foundation in each of the following areas to students' success in Algebra I? *(Please circle one for each line)*

	Not at all important	Slightly important	Moderately important	Very important	Extremely important
1a. Whole numbers and operations with whole numbers	1	2	3	4	5
1b. Positive and negative integers and operations with positive and negative integers	1	2	3	4	5
1c. Rational numbers and operations involving fractions and decimals	1	2	3	4	5
1d. Ratios, percents, rates, and proportions.	1	2	3	4	5
1e. Solving problems involving whole numbers, fractions, and decimals	1	2	3	4	5
1f. The concept of variables	1	2	3	4	5
1g. Manipulation of variables	1	2	3	4	5
1h. Solving simple linear equations and inequalities	1	2	3	4	5
1i. Plotting points, and graphing lines on the 4 quadrant coordinate plane	1	2	3	4	5
1j. Measurement formulas of basic geometric shapes	1	2	3	4	5
1k. Basic study skills and work habits necessary for success in math	1	2	3	4	5
1l. Computation skills	1	2	3	4	5
1m. Ability to use math in contexts that are identified as real world situations	1	2	3	4	5
1n. Working independently	1	2	3	4	5
1o. Working cooperatively with other students	1	2	3	4	5

2. Please provide a brief description of any changes you would like to see in the curriculum leading up to algebra in your district.

3. In your opinion, are the local district expectations for student proficiency with Algebra I: *(Please circle one)*

1 Too low 2 About right 3 Too high 4 I do not know the expectations 5 There are no district expectations

4. a. How well do you feel your preservice teacher education program prepared you to teach Algebra I?

1 Very well 2 Adequately 3 Less than adequately 4 Very poorly

4. b. How well do you feel your professional development opportunities have helped you to teach Algebra I?

1 Very well 2 Adequately 3 Less than adequately 4 Very poorly

5. Does your district have teachers at the K-8 level who are “mathematics specialists” (even if they are called something else?)

1 Yes ↓ 2 No → skip to question 6 3 Not sure → skip to question 6

	Yes	No	Not Sure
5a. Do these teachers work with classes of students?	1	2	3
5b. Do these teachers provide support to other teachers?	1	2	3
5c. Are these teachers specifically qualified or trained to be mathematics specialists?	1	2	3

6. Are students required to pass Algebra I in order to graduate high school in your district?

1 Yes 2 No 3 Don't know

7. How do you rate the state or local school district mathematics standards and math tests that they currently use for Algebra I? (Circle one for each line)

	Excellent	Good	Fair	Poor	Not applicable -- no standards defined
7a. Content standards for Algebra I	1	2	3	4	5
7b. Assessments of Algebra I outcomes	1	2	3	4	5

Section 4: Teacher Background

1. What is your sex?

- 1 Male 2 Female

2. Are you Hispanic or Latino?

1 Yes → If Yes, answer question 3.

2 No → If no, skip to question 4

3. Which of the following best describes your Hispanic origin or descent?
(Mark one or more.)

- 1 Mexican/a or Chicano/a 2 Puerto Rican 3 Cuban 4 Other Hispanic, *Specify*

4. What is your racial background? (Mark one or more.)

- 1 American Indian or Alaska Native 2 Native Hawaiian or other Pacific Islander 3 Asian 4 Black or African American 5 White

5. What is your age?

(FILL IN AGE)

6. What is your employment status in this school system?

- 1 Regular full-time teacher 2 Regular part-time teacher 3 Long-term substitute teacher 4 Other, *Specify*

7. Counting this year how many years in total have you taught at either the elementary and secondary level? Please also note the number of years in total.

7a. Elementary Total (K-6)

Number of Years

7b. Secondary (7-12)

Number of Years

7c. Total (K-12)

Number of Years

8. Counting this year, how many years in total have you taught in this school?

Number of Years

9. How many years of experience do you have teaching Algebra I?

Number of Years

**10. Which of the following best describes your Hispanic origin or descent?
(Please circle one)**

1
Math

2
Science

3
English

4
Social Studies/
History

5
Other, please specify _____

11. What type of teaching certification do you currently hold?

1 Regular or standard state certificate

2 Probationary certificate

3 Provisional or temporary certificate

4 Waiver or emergency certificate

5 Other, please specify _____

12. Which of the following best describes your national certification status?

(Circle one)

- 1 I have achieved certification by the National Board for Professional Teaching Standards
- 2 I am currently working on National Board Certification but have not achieved it
- 3 I am not working on National Board Certification

13. Under the No Child Left Behind Law (NCLB) are you considered to be a "highly qualified" teacher of:

	Yes	No	Refused
13a. high school mathematics	1	2	3
13b. middle school mathematics	1	2	3

14. What is the highest academic degree you hold?

- 1 Less than a Bachelor's degree
- 2 Bachelor's
- 3 Master's
- 4 Education specialist or professional diploma based on at least one year of work past Master's degree level
- 5 Doctorate
- 6 Professional degree (e.g., M.D. L.L.B., J.D., D.D.S.)

15. In what YEAR did you receive your highest college degree?

YYYY

16. What was your major field of study for your bachelor's degree?

- 1 Education
- 2 English
- 3 History
- 4 Mathematics
- 5 Natural/Physical science
- 6 Foreign language
- 7 Other specify: _____

17. What was your minor field of study for your bachelor's degree?

- 1 Education
- 2 English
- 3 History
- 4 Mathematics
- 5 Natural/Physical science
- 6 Foreign language
- 7 *Other specify:* _____
- 8 Not applicable

18. If you have earned a graduate degree, what was your major field of study for your highest graduate degree?

- 1 Education
- 2 English
- 3 History
- 4 Mathematics
- 5 Natural/Physical science
- 6 Foreign language
- 7 *Other specify:* _____
- 8 Not applicable

19. How skillful would you say you are at helping students master Algebra I?

- 1 Very skillful
- 2 Somewhat skillful
- 3 Sometimes less skillful than I would like to be
- 4 Much less skillful than I would like to be

20. What do you find most challenging in teaching Algebra I successfully?

(Please check one)

- 1 Explaining material to struggling students
- 2 Handling accelerated students
- 3 Teaching procedures
- 4 Explaining concepts (e.g., why procedures work, what ideas mean)
- 5 Using diagrams or models effectively
- 6 Interpreting students' errors and difficulties
- 7 Working with unmotivated students
- 8 Working with advanced students
- 9 Helping students whose home language is other than Standard English
- 10 Making mathematics accessible and comprehensible to all of my students
- 11 Other, please specify: _____

21. Please provide the following information in case we need to contact you for clarification on any responses:

Best time of the day to reach you:

E-mail address

Thank you!