



INTERNATIONAL ASSOCIATION FOR THE  
EVALUATION OF EDUCATIONAL ACHIEVEMENT

SECOND  
STUDY OF  
MATHEMATICS

GRADE 8  
STUDENT QUESTIONNAIRE (POSTTEST)

BOOKLET 4L

## STUDENT QUESTIONNAIRE

GRADE 8

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Please write the nine-digit number that your teacher assigned as your personal identification number in the space above.

This booklet has two sections. Section A contains questions about you and what you do. Section B contains questions to find out what you think about mathematics.

All of your answers will be confidential. We will not know which name goes with your student number.

## INSTRUCTIONS FOR SECTION A

If you have any difficulty with Questions 1 - 15 in this section, you may ask your teacher for help. Questions 16 - 24 should be your own judgement of what you believe. There are no right or wrong answers to these questions.

Your teacher will tell you when to start this section.

## INSTRUCTIONS FOR SECTION B

In this section we want to find out what you think of mathematics. There are no right or wrong answers.

The first set of questions asks how you feel about certain mathematical topics. Here is a sample item from this set:

How do you feel about working problems that involve fractions?

a	Very important	Important	Undecided	Not important	Not at all important
b	Very easy	Easy	Undecided	Hard	Very hard
c	Like a lot	Like	Undecided	Dislike	Dislike a lot

If you feel that working problems with fractions is important, then you should circle "Important" as has been done above. Now look at b and see that the question is asking you if you find working problems that involve fractions very easy, easy, you are undecided, hard, or very hard. Now put a circle around the answer you choose. Now do the same for c.

From question 40 onwards the instructions and items are slightly different. For example, here is a practice item:

I am as good at mathematics as most students my age.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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Again you should circle how you feel about that statement. Please do that now.

Your teacher will tell you when to start section B.



## SECTION A

Please answer all of the following questions as best you can. If you have any difficulty with questions 1 - 15, ask your teacher for help. Please answer each question by either writing your response in the space provided, checking the appropriate box, or circling the desired choice.

1. Are you a girl or a boy? Girl  Boy

2. What was your date of birth?

Month	

Day	

1	9		
Year			

3. How many older brothers and sisters do you have? \_\_\_\_\_  
(Count all older brothers and sisters, even if they no longer live at your home.)

4. What is (or was) your father's occupation?  
(If your father is dead or is no longer with your family, give your male guardian's occupation. If you do not have a male guardian, please state what your father's occupation was.)

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Now please state the duties he performs and for whom he works. For example, if he is a "salesman," tell what he sells and where he works.

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5. Does your mother have an occupation other than housewife?  
(If your mother is dead or is no longer with your family, give your female guardian's occupation. If you do not have a female guardian, please state what your mother's occupation was.)

My mother has no occupation other than housewife.

My mother has a part-time occupation other than housewife.

My mother has a full-time occupation other than housewife.

Please explain, just as you did for your father, what your mother's occupation is other than housewife. Please tell the duties she performs and for whom she works.

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6. Check the highest type of school attended by your father or male guardian.

- A Very little schooling, or no schooling at all.
- B Elementary school.
- C High school.
- D College, university, or some form of education beyond high school.

7. Check the highest type of school attended by your mother or female guardian.

- A Very little schooling, or no schooling at all.
- B Elementary school.
- C High school.
- D College, university, or some form of education beyond high school.

8. Do your parents speak English at home?

- A They do not speak English at home.
- B They sometimes speak English at home.
- C They usually speak English at home.
- D They speak only English at home.



9. After this year, how many more years of full-time (including University, College, etc.) education do you expect or plan to complete?

A None at all (0 years).

B Up to 2 years.

C More than 2 years - up to 5 years.

D More than 5 years - up to 8 years.

E More than 8 years.

10. About how many hours of homework for mathematics, outside of formal class time, have you been doing each week? Give a response for what you actually did last week as well as a response for what you think you do in a typical week.

Hours last week

 

Hours in a typical week

 

11. About how many hours of homework for all subjects, outside of formal class time, do you usually do each week?

Hours last week

 

Hours in a typical week

 

12. How much extra mathematics tutoring or instruction do you receive outside of your school each week? (Give your answer to the nearest hour.)

Hours last week

 

Hours in a typical week

 

13. So far this year, how frequently has any member of your family helped you with your mathematics? (Check one)

A Never or very infrequently.

B Occasionally.

C Regularly.

14. Do you use one or more of the following? (Check all that apply)

	Within Home	In Mathematics Classes	In Other Classes
A Abacus (soroban).			
B Slide rule.			
C Four-function calculator.			
D "Scientific" (i.e., pre-programmed multi-function) calculator or "Programmable" calculator.			
E Personal computer or computer terminal.			

15. What uses do you make of calculators and computers?

Please fill in each square with

N for NO  
Y for YES

	Four Function Calculator	Scientific or Programmable Calculator	Computer or Terminal
(a) <u>In school</u>			
A Purely for CHECKING answers.			
B As an aid in SOLVING problems.			
C For taking tests.			
D As an aid in doing projects.			
E For recreation.			
(b) <u>At home</u>			
F To do homework.			

Below are some statements about you, your mother or father (or both), and mathematics. You are asked to mark each statement in terms of how well it describes what your parent does or thinks about mathematics. Is it like what they do or think? Is it not like what they do or think?

For example, consider the statement:

"My father thinks that mathematics is fun."

If this describes what your father thinks about mathematics, mark the response as shown below:

Exactly like	Somewhat like	Unsure	Not very much like	Not at all like
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Make only one response to each item. Please make sure that you answer all items.

16. My father seems to enjoy doing mathematics.

Exactly like	Somewhat like	Unsure	Not very much like	Not at all like
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17. My mother seems to enjoy doing mathematics.

Exactly like	Somewhat like	Unsure	Not very much like	Not at all like
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18. My father would usually be able to do my mathematics homework problems if I asked him to help.

Exactly like	Somewhat like	Unsure	Not very much like	Not at all like
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19. My mother would usually be able to do my mathematics homework problems if I asked her to help.

Exactly like	Somewhat like	Unsure	Not very much like	Not at all like
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20. My parents are usually very interested in helping me with mathematics.

Exactly like	Somewhat like	Unsure	Not very much like	Not at all like
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21. My mother thinks that learning mathematics is very important for me.

Exactly like	Somewhat like	Unsure	Not very much like	Not at all like
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22. My father thinks that learning mathematics is very important for me.

Exactly like	Somewhat like	Unsure	Not very much like	Not at all like
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23. My parents encourage me to learn as much mathematics as possible.

Exactly like	Somewhat like	Unsure	Not very much like	Not at all like
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24. My parents want me to do very well in my mathematics class.

Exactly like	Somewhat like	Unsure	Not very much like	Not at all like
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END OF SECTION A

## SECTION B

In questions 25 - 39 you are given a list of things you do or learn about in mathematics. For each of the activities you are asked to state how important they are, how difficult you find them, and how much you like them. Circle the choice which best describes your feelings.

How do you feel about each of these mathematics activities?

25. Checking an answer to a problem by going back over it.

a	Very important	Important	Undecided	Not important	Not at all important
b	Very easy	Easy	Undecided	Hard	Very hard
c	Like a lot	Like	Undecided	Dislike	Dislike a lot

26. Memorizing rules and formulae.

a	Very important	Important	Undecided	Not important	Not at all important
b	Very easy	Easy	Undecided	Hard	Very hard
c	Like a lot	Like	Undecided	Dislike	Dislike a lot

27. Using charts and graphs.

a	Very important	Important	Undecided	Not important	Not at all important
b	Very easy	Easy	Undecided	Hard	Very hard
c	Like a lot	Like	Undecided	Dislike	Dislike a lot

28. Solving word problems.

a	Very important	Important	Undecided	Not important	Not at all important
b	Very easy	Easy	Undecided	Hard	Very hard
c	Like a lot	Like	Undecided	Dislike	Dislike a lot

## 29. Solving equations.

a	Very important	Important	Undecided	Not important	Not at all important
b	Very easy	Easy	Undecided	Hard	Very hard
c	Like a lot	Like	Undecided	Dislike	Dislike a lot

## 30. Solving inequalities.

a	Very important	Important	Undecided	Not important	Not at all important
b	Very easy	Easy	Undecided	Hard	Very hard
c	Like a lot	Like	Undecided	Dislike	Dislike a lot

## 31. Learning about geometric figures.

a	Very important	Important	Undecided	Not important	Not at all important
b	Very easy	Easy	Undecided	Hard	Very hard
c	Like a lot	Like	Undecided	Dislike	Dislike a lot

## 32. Estimating answers to problems.

a	Very important	Important	Undecided	Not important	Not at all important
b	Very easy	Easy	Undecided	Hard	Very hard
c	Like a lot	Like	Undecided	Dislike	Dislike a lot



## 33. Learning about ratio and proportion.

a	Very important	Important	Undecided	Not important	Not at all important
b	Very easy	Easy	Undecided	Hard	Very hard
c	Like a lot	Like	Undecided	Dislike	Dislike a lot

## 34. Working problems that involve decimal fractions.

a	Very important	Important	Undecided	Not important	Not at all important
b	Very easy	Easy	Undecided	Hard	Very hard
c	Like a lot	Like	Undecided	Dislike	Dislike a lot

## 35. Working with sets.

a	Very important	Important	Undecided	Not important	Not at all important
b	Very easy	Easy	Undecided	Hard	Very hard
c	Like a lot	Like	Undecided	Dislike	Dislike a lot

## 36. Learning about units of measure (e.g., distance, area, volume).

a	Very important	Important	Undecided	Not important	Not at all important
b	Very easy	Easy	Undecided	Hard	Very hard
c	Like a lot	Like	Undecided	Dislike	Dislike a lot

37. Drawing geometric figures.

a	Very important	Important	Undecided	Not important	Not at all important
b	Very easy	Easy	Undecided	Hard	Very hard
c	Like a lot	Like	Undecided	Dislike	Dislike a lot

38. Getting information from statistical tables.

a	Very important	Important	Undecided	Not important	Not at all important
b	Very easy	Easy	Undecided	Hard	Very hard
c	Like a lot	Like	Undecided	Dislike	Dislike a lot

39. Comparing geometric figures that are similar.

a	Very important	Important	Undecided	Not important	Not at all important
b	Very easy	Easy	Undecided	Hard	Very hard
c	Like a lot	Like	Undecided	Dislike	Dislike a lot

Express, on a five point scale, the extent of your agreement between the feeling expressed in each of the following statements and your own personal feelings. Circle the choice which best describes your feelings.

40. Solving word problems is more fun if you use a handheld calculator.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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41. I can get along well in everyday life without using mathematics.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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42. I usually understand what we are talking about in mathematics class.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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43. I will work a long time in order to understand a new idea in mathematics.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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44. A knowledge of mathematics is not necessary in most occupations.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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45. I really want to do well in mathematics.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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46. I would like to work at a job that lets me use mathematics.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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47. There have not been any new discoveries in mathematics for a long time.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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48. Mathematics helps one to think logically.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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49. I feel good when I solve a mathematics problem by myself.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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50. If you use a hand-held calculator you do not have to learn to compute.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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51. Using computers makes learning mathematics more mechanical and boring.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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52. Mathematics is not needed in everyday living.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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53. My parents really want me to do well in mathematics.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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54. I think mathematics is fun.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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55. Everyone should learn something about computers.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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56. Mathematics will change rapidly in the near future.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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57. A woman needs a career just as much as a man does.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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58. There is always a rule to follow in solving a mathematics problem.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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59. It scares me to have to take mathematics.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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60. It is important to know mathematics in order to get a good job.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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61. I could never be a good mathematician.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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62. I like to help others with mathematics problems.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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63. Working with numbers makes me happy.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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64. Trial and error can often be used to solve a mathematics problem.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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65. Computers solve problems better than people do.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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66. I am not so good at mathematics.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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67. I feel challenged when I am given a difficult mathematics problem.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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68. Learning mathematics involves mostly memorizing.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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69. When I cannot figure out a problem, I feel as though I am lost in a maze and cannot find my way out.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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70. In mathematics, problems can be solved without using rules.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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71. I am looking forward to taking more mathematics.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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72. Computers do lots of good things for people.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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73. Mathematics is a good field for creative people.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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74. No matter how hard I try I still do not do well in mathematics.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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75. It is less fun to learn mathematical ideas if you use a hand-held calculator.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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76. Mathematics is harder for me than for most persons.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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77. Men make better scientists and engineers than women.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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78. Mathematics is useful in solving everyday problems.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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79. Mathematics helps one to think according to strict rules.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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80. I refuse to spend a lot of my own time doing mathematics.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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81. Most of mathematics has practical use on the job.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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82. There is little place for originality in solving mathematics problems.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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83. Boys have more natural ability in mathematics than girls.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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84. Mathematics is a set of rules.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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85. Most people do not use mathematics in their jobs.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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86. Estimating is an important mathematics skill.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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87. There are many different ways to solve most mathematics problems.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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88. I usually feel calm when doing mathematics problems.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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89. Using a hand-held calculator can help you learn many different mathematical topics.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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90. Boys need to know more mathematics than girls.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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91. If I had my choice I would not learn any more mathematics.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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92. New discoveries in mathematics are constantly being made.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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93. A mathematics problem can always be solved in different ways.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
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