Identification Label



TRENDS IN INTERNATIONAL MATHEMATICS AND SCIENCE STUDY

# Student Questionnaire Advanced Mathematics

<TIMSS National Research Center Name> <Address>



TIMSS & PIRLS International Study Center Lynch School of Education, Boston College

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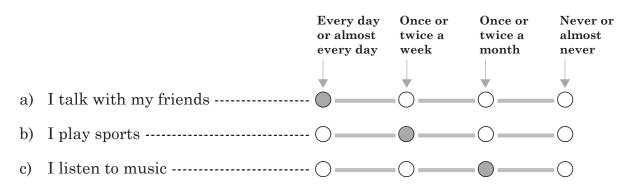
## Directions

In this booklet, you will find questions about yourself. Some questions ask for facts while other questions ask for your opinion.

Each question is followed by a number of answers. Shade in the circle next to or under the answer of your choice as shown in the example below.

## Example

How often do you do these things?



- Read each question carefully, and pick the answer you think is best.
- Fill in the circle next to or under your answer.
- If you decide to change your answer, draw an X through your first answer, like this: X. Then, fill in the circle next to or under your new answer.
- Ask for help if you do not understand something or are not sure how to answer.

## About you

1 \_\_\_\_

Are you female or male?

Fill one circle only.

Female -- 🔿

Male -- 🔿

#### 2.

#### When were you born?

Fill the circles next to the month and year you were born.

a) Month	b) Year
January 🔿	1993 🔿
February 🔿	1994 🔿
March $\bigcirc$	1995 🔾
April 🔿	1996 🔿
May 🔿	1997 🔿
June 🔘	1998 🔿
July 🔾	1999 🔿
August 🔿	2000 🔿
September $\bigcirc$	2001 🔿
October 🔿	Other 🔿
November $\bigcirc$	
December 🔿	

#### How often do you speak <language of test> at home?

Fill one circle only.

Always -- 🔿

Almost always -- 🔿

Sometimes -- 🔿

Never -- 🔿

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About how many books are there in your home? (Do not count magazines, newspapers, or your school books.)

Fill one circle only.

None or very few  $(0-10 \text{ books}) \dots \bigcirc$ 

Enough to fill one shelf  $(11-25 \text{ books}) - \bigcirc$ 

Enough to fill one bookcase  $(26-100 \text{ books}) - \bigcirc$ 

Enough to fill two bookcases (101–200 books) -- ()

Enough to fill three or more bookcases (more than 200) -- ()

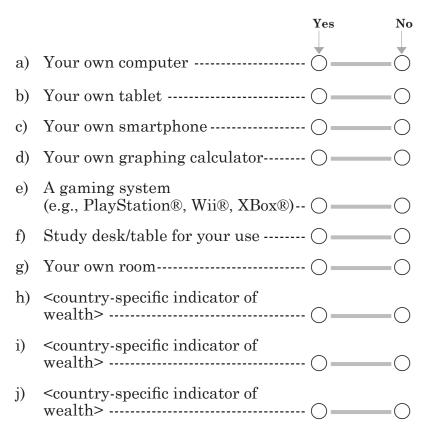
How many digital information devices are there in your home? Count computers, tablets, smartphones, smart TVs, and e-readers. (Do not count other devices.)

Fill one circle only.

None -- () 1-3 devices -- () 4-6 devices -- () 7-10 devices -- () More than 10 devices -- ()

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Do you have any of these things?



## A. What is the highest level of education completed by your mother (or stepmother or female guardian)?

Fill one circle only.

Some <Primary education—ISCED Level 1 or Lower secondary education—ISCED Level 2> or did not go to school -- () <Lower secondary education—ISCED Level 2> -- () <Upper secondary education—ISCED Level 3> -- () <Post-secondary, non-tertiary education—ISCED Level 4> -- () <Short-cycle tertiary education—ISCED Level 4> -- () <Short-cycle tertiary education—ISCED Level 5> -- () <Bachelor's or equivalent level—ISCED Level 6> -- () <Master's or equivalent level—ISCED Level 7> -- () <Doctor or equivalent level—ISCED Level 8> -- ()

I don't know -- 🔿

B. What is the highest level of education completed by your father (or stepfather or male guardian)?

Fill one circle only.

Some <Primary education—ISCED Level 1 or Lower secondary education—ISCED Level 2> or did not go to school -- ()

<Lower secondary education—ISCED Level 2> -- ()

<Upper secondary education—ISCED Level 3> -- 〇

<Post-secondary, non-tertiary education—ISCED Level 4> -- ()

<Short-cycle tertiary education—ISCED Level 5> --  $\bigcirc$ 

<Bachelor's or equivalent level—ISCED Level  $6 > -- \bigcirc$ 

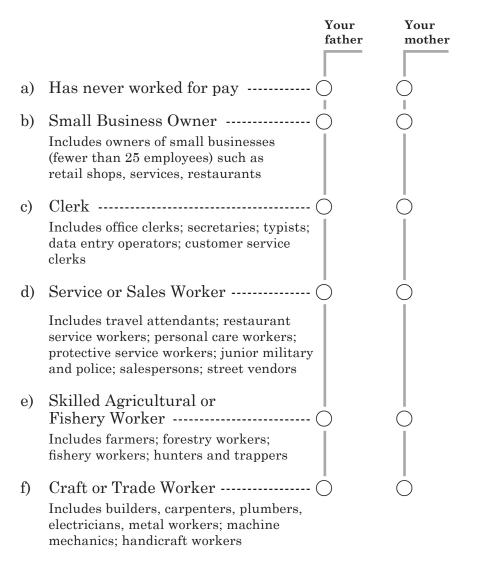
<Master's or equivalent level—ISCED Level 7> --  $\bigcirc$ 

<Doctor or equivalent level—ISCED Level 8> -- 〇

I don't know -- ()

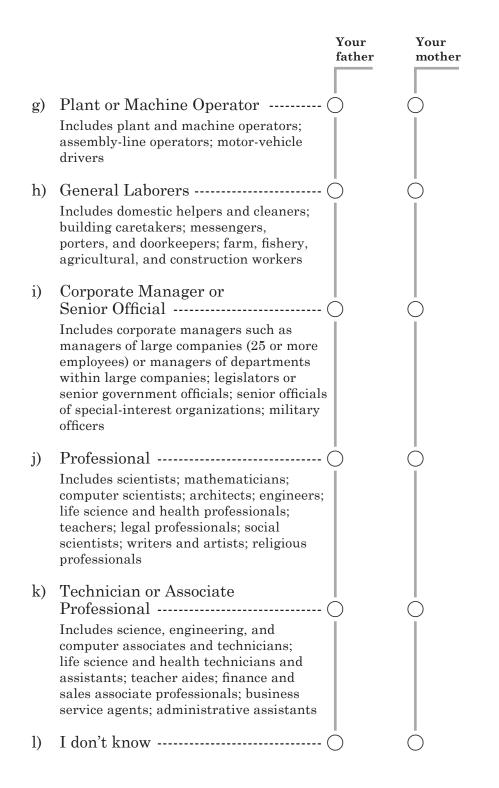
What kind of work do your father (or stepfather or male guardian) and mother (or stepmother or female guardian) do for their main jobs?

For each, fill the circle for the job category that best describes what he/she does. Each category has a few examples to help you decide the correct category. If your father or mother is not working now, think about the last job he/she had.



Fill one circle in each column.

#### **(continued)**



How far in your education do you expect to go?

Fill one circle only.

<Upper secondary education—ISCED Level 3> -- () <Post-secondary, non-tertiary education—ISCED Level 4> -- () <Short-cycle tertiary education—ISCED Level 5> -- () <Bachelor's or equivalent level—ISCED Level 6> -- () <Master's or equivalent level—ISCED Level 7> -- () <Doctor or equivalent

level—ISCED Level 8> -- 〇

Student Questionnaire — Advanced Mathematics

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## 10\_\_\_\_\_

# If you plan to continue your education, which area(s) do you intend to study?

Fill the circle(s) that apply.

$\bigcirc$	Mathematics or Statistics
	Physics
	Chemistry
0	Biological and Biomedical Sciences (e.g., dentistry, medicine, nursing, pharmacology, veterinary medicine)
0	Engineering and Engineering Technologies (e.g., aerospace engineering, chemical engineering, civil engineering, electrical engineering, mechanical engineering)
	Computer and Information Sciences
	Education
0	Business (e.g., accounting, marketing, administration, finance, management)
0	administration, finance, management)
	administration, finance, management)
0	administration, finance, management) - Law - Social Sciences (e.g., sociology, political science,
0	administration, finance, management) Law Social Sciences (e.g., sociology, political science, economics, psychology) Arts and Humanities (e.g., art, language,

11\_\_\_

# In the future, do you want to work in any of the following professional fields?

		Yes	Maybe	No
a)	Education (e.g., teacher, university professor)	) ()		-0
b)	Engineering and Engineering Technologies (e.g., aerospace engineer, chemical engineer, civil engineer, electrical engineer, mechanical engineer)	0—	O	-0
c)	Computer and Information Sciences (e.g., database administrator, network administrator, software or application developer, systems analyst)	()	———————————————————————————————————————	-0
d)	Finance/Banking	O	O	$-\bigcirc$
e)	Biological and Biomedical Sciences (e.g., biomedical engineer, biochemist, biophysicist, dentist, medical doctor, nurse,			
	veterinarian)	()	-	$-\bigcirc$
f)	Environmental Sciences	O	-	$-\bigcirc$
g)	Agriculture and Agricultural Sciences	O		$-\bigcirc$
h)	Actuarial Sciences	O		-0
i)	Other Fields	O		$-\bigcirc$

A. Was your mother (or stepmother or female guardian) born in <country>?

Fill one circle only.

Yes -- () No -- () I don't know -- ()

B. Was your father (or stepfather or male guardian) born in <country>?

Fill one circle only.

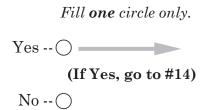
Yes -- 🔿

No -- 🔿

I don't know -- 🔿

#### 13.

A. Were you born in <country>?



If No,

B. If you were not born in <country>, how old were you when you came to <country>?

Fill **one** circle only.

Older than 15 years old -- 🔘

11 to 15 years old -- ()

5 to 10 years old --  $\bigcirc$ 

Younger than 5 years old -- 🔿

## **Studying Advanced Mathematics**

### 14.

How much time do you spend in mathematics class each week?

\_\_\_\_\_ minutes per week Write in the number of **minutes** per week. Please convert the number of classes/periods into minutes.

## 15\_\_\_\_\_

# How much time do you spend on mathematics outside of class each week?

\_\_\_\_\_ minutes per week Write in the number of **minutes** per week. Please convert the number of hours into minutes.

## 16\_

# A. During the school year, do you work at a paid job on a regular basis?

Fill one circle only.



(If No, go to #17)

If Yes,

B. How much time do you spend working at the paid job each week?

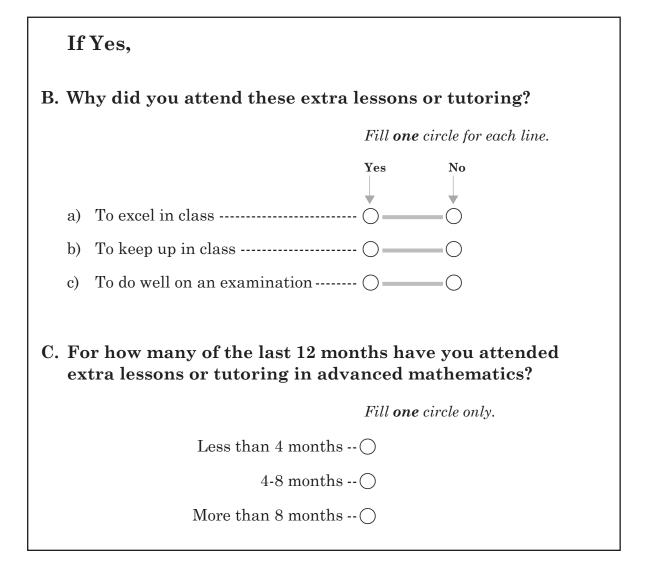
\_\_\_\_\_ minutes per week Write in the number of **minutes** per week. Please convert the number of hours into minutes.

# A. During the last 12 months, have you attended extra lessons or tutoring not provided by the school in advanced mathematics?

Fill one circle only.







# How much do you agree with these statements about your <u>advanced mathematics lessons</u>?

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
a)	The teacher clearly communicates the purpose of each mathematics lesson	· •	-0		
b)	I know what my teacher expects me to do	· ()	0	0	$\bigcirc$
c)	My teacher is easy to understand	$\sim$	$\bigcirc$	$\bigcirc$	$\bigcirc$
d)	I am interested in what my teacher says	· ()	0	0	$\bigcirc$
e)	My teacher gives me interesting things to do	· ()	0	0	
f)	My teacher asks me thought provoking questions	· ()	0	0	$\bigcirc$
g)	My teacher has clear answers to my questions	· ()	0	0	$\bigcirc$
h)	My teacher links new content to what I already know	· ()	0	0	

#### 18<sup>(continued)</sup>

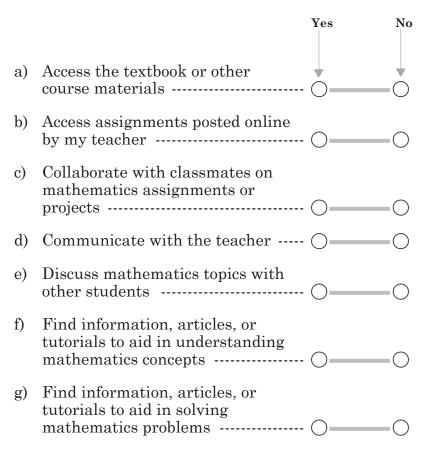
# How much do you agree with these statements about your <u>advanced mathematics lessons</u>?

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
i)	My teacher is good at explaining advanced mathematics	<b>•</b>		<b>•</b>	
j)	My teacher provides the opportunity for me to show what I have learned	0	$\bigcirc$	0	$\bigcirc$
k)	My teacher encourages me to keep working on advanced mathematics problems until I solve them	0	$\bigcirc$	0	$\bigcirc$
1)	My teacher provides helpful feedback on my schoolwork (including homework)	0	$\bigcirc$	0	$\bigcirc$
m)	My teacher uses a variety of teaching methods, tasks, and activities to help us learn	0	$\bigcirc$	$\bigcirc$	$\bigcirc$
n)	My teacher believes that I can learn difficult advanced mathematics material	0	$\bigcirc$	$\bigcirc$	$\bigcirc$
0)	I like the way my teacher teaches mathematics	0	0	0	

#### 19.

Do you use the Internet to do any of the following tasks for advanced mathematics schoolwork (including classroom tasks, homework, and studying outside of class)?

Fill one circle for each line.



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# How much do you agree with these statements about the mathematics you are studying?

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
a)	When I do mathematics problems, I sometimes get completely absorbed	Ŏ	Ŏ	0	
b)	I get a sense of satisfaction when I solve mathematics problems	0	0	$\bigcirc$	$\bigcirc$
c)	I feel bored when I do my mathematics schoolwork	0	0	$\bigcirc$	
d)	I like studying for my mathematics class outside of school	0	0	$\bigcirc$	$\bigcirc$
e)	It is interesting to learn mathematics theory	0	0	$\bigcirc$	
f)	I dread my mathematics class	0	0	$\bigcirc$	$\bigcirc$
g)	I am studying mathematics because I like to learn new things	0	0	$\bigcirc$	$\bigcirc$
h)	I enjoy figuring out challenging mathematics	0	0	$\bigcirc$	$\bigcirc$
i)	Mathematics is one of my favorite subjects	0	0	$\bigcirc$	$\bigcirc$
j)	Jobs that require advanced mathematics skills seem interesting to me		0	0	$\bigcirc$
k)	I wish I did not have to study mathematics	0	0	$\bigcirc$	
1)	I enjoy thinking about the world in terms of mathematical relationships	0	0	0	

# How much do you agree with these statements about the mathematics you are studying?

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
a)	Learning mathematics will help me get ahead in the world	- 0			
b)	It is important to do well in my mathematics class	- ()	0	0	$\bigcirc$
c)	The mathematics I am studying is not useful for my future	- ()	0	0	$\bigcirc$
d)	My parents are pleased that I am taking advanced mathematics	- ()	0	0	$\bigcirc$
e)	Doing well in mathematics will help me get into the <university> of my choice</university>	- ()		-0	-
f)	Learning advanced mathematics does not seem to be a worthwhile exercise	- ()	0	0	$\bigcirc$
g)	My parents think that it is important that I do well in my mathematics class	- ()	$\bigcirc$	0	$\bigcirc$
h)	I like telling people I am studying advanced mathematics	- ()	0	0	
i)	Learning advanced mathematics will give me more job opportunities	- ()	$\bigcirc$	$\bigcirc$	$\bigcirc$

## 22.

What do you think about your school? Tell how much you agree with these statements.

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
a)	I enjoy school	· •	- O	- O	
b)	I feel safe when I am at school		0	0	$\bigcirc$
c)	I feel like I belong at this school	- ()	0	0	$\bigcirc$
d)	I like to see my classmates at school	- ()	0	0	$\bigcirc$
e)	Teachers at my school are fair to me	- ()	0	0	
f)	I am proud to go to this school	- ()	$\bigcirc$	$\bigcirc$	$\bigcirc$
g)	I learn a lot in school	- ()	0	0	$\bigcirc$
h)	My classmates respect students who excel in school subjects	- ()	0	0	$\bigcirc$
i)	My classmates respect students wh struggle learning school subjects		0	0	$\bigcirc$

During this school year, how often have other students from your school done any of the following things to you (including through texting or the Internet)?

#### Fill one circle for each line.

		At least once a week	Once or twice a month	A few times a year	Never
a)	Made fun of me or called me names	<b>•</b>			
b)	Excluded me from their activities	$\bigcirc$	0	0	$\bigcirc$
c)	Spread lies about me	0	0	0	$\bigcirc$
d)	Stole something from me	0	0	0	$\bigcirc$
e)	Hit or hurt me (e.g., shoving, hitting, kicking)	0	- O	$\bigcirc$	$\bigcirc$
f)	Made me do things I didn't want to do	0	0	$\bigcirc$	$\bigcirc$
g)	Posted embarrassing things about me online	0	0	0	$\bigcirc$
h)	Threatened me	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$



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