



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?

Fill **one** circle for each line.

	Every day or almost every day	Once or twice a week	Once or twice a month	Never or almost never
a) I talk with my friends .....	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) I play sports .....	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) I listen to music .....	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

- 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: ~~⊙~~. 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**

January --

February --

March --

April --

May --

June --

July --

August --

September --

October --

November --

December --

**b) Year**

1993 --

1994 --

1995 --

1996 --

1997 --

1998 --

1999 --

2000 --

2001 --

Other --

**3**

---

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

*Fill one circle only.*

Always --

Almost always --

Sometimes --

Never --

**4**

---

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 books) --

Enough to fill one shelf  
(11–25 books) --

Enough to fill one bookcase  
(26–100 books) --

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

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

## 5

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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 --

## 6

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Do you have any of these things?

*Fill one circle for each line.*

- |  | Yes                   | No                    |
|--|-----------------------|-----------------------|
| a) Your own computer .....                                 | <input type="radio"/> | <input type="radio"/> |
| b) Your own tablet .....                                   | <input type="radio"/> | <input type="radio"/> |
| c) Your own smartphone .....                               | <input type="radio"/> | <input type="radio"/> |
| d) Your own graphing calculator.....                       | <input type="radio"/> | <input type="radio"/> |
| e) A gaming system<br>(e.g., PlayStation®, Wii®, Xbox®) -- | <input type="radio"/> | <input type="radio"/> |
| f) Study desk/table for your use .....                     | <input type="radio"/> | <input type="radio"/> |
| g) Your own room.....                                      | <input type="radio"/> | <input type="radio"/> |
| h) <country-specific indicator of<br>wealth> .....         | <input type="radio"/> | <input type="radio"/> |
| i) <country-specific indicator of<br>wealth> .....         | <input type="radio"/> | <input type="radio"/> |
| j) <country-specific indicator of<br>wealth> .....         | <input type="radio"/> | <input type="radio"/> |

# 7

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## 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 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> --
- <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> --
- I don’t know --

# 8

**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.*

	Your father	Your mother
a) Has never worked for pay -----	<input type="radio"/>	<input type="radio"/>
b) Small Business Owner ----- Includes owners of small businesses (fewer than 25 employees) such as retail shops, services, restaurants	<input type="radio"/>	<input type="radio"/>
c) Clerk ----- Includes office clerks; secretaries; typists; data entry operators; customer service clerks	<input type="radio"/>	<input type="radio"/>
d) Service or Sales Worker ----- Includes travel attendants; restaurant service workers; personal care workers; protective service workers; junior military and police; salespersons; street vendors	<input type="radio"/>	<input type="radio"/>
e) Skilled Agricultural or Fishery Worker ----- Includes farmers; forestry workers; fishery workers; hunters and trappers	<input type="radio"/>	<input type="radio"/>
f) Craft or Trade Worker ----- Includes builders, carpenters, plumbers, electricians, metal workers; machine mechanics; handicraft workers	<input type="radio"/>	<input type="radio"/>

**Continued on next page** →



## 8 (continued)

	Your father	Your mother
g) Plant or Machine Operator ----- Includes plant and machine operators; assembly-line operators; motor-vehicle drivers	<input type="radio"/>	<input type="radio"/>
h) General Laborers ----- Includes domestic helpers and cleaners; building caretakers; messengers, porters, and doorkeepers; farm, fishery, agricultural, and construction workers	<input type="radio"/>	<input type="radio"/>
i) Corporate Manager or Senior Official ----- Includes corporate managers such as managers of large companies (25 or more employees) or managers of departments within large companies; legislators or senior government officials; senior officials of special-interest organizations; military officers	<input type="radio"/>	<input type="radio"/>
j) Professional ----- Includes scientists; mathematicians; computer scientists; architects; engineers; life science and health professionals; teachers; legal professionals; social scientists; writers and artists; religious professionals	<input type="radio"/>	<input type="radio"/>
k) Technician or Associate Professional ----- Includes science, engineering, and computer associates and technicians; life science and health technicians and assistants; teacher aides; finance and sales associate professionals; business service agents; administrative assistants	<input type="radio"/>	<input type="radio"/>
l) I don't know -----	<input type="radio"/>	<input type="radio"/>

# 9

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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> --

# 10

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

*Fill the circle(s) that apply.*

Mathematics or Statistics -----○

Physics -----○

Chemistry -----○

Biological and Biomedical Sciences  
(e.g., dentistry, medicine, nursing,  
pharmacology, veterinary medicine) -----○

Engineering and Engineering Technologies  
(e.g., aerospace engineering, chemical  
engineering, civil engineering, electrical  
engineering, mechanical engineering) -----○

Computer and Information Sciences -----○

Education -----○

Business (e.g., accounting, marketing,  
administration, finance, management) -----○

Law -----○

Social Sciences (e.g., sociology, political science,  
economics, psychology) -----○

Arts and Humanities (e.g., art, language,  
literature, history, philosophy) -----○

Other Science Fields of Study -----○

Other Non-science Fields of Study -----○

# 11

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

*Fill **one** circle for each line.*

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

## 12

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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>?

*Fill one circle only.*

Yes --  

**(If Yes, go to #14)**

No --

**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 --

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.

Yes --

No --  

(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.

# 17

**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.*

Yes --

No --  

**(If No, go to #18)**

**If Yes,**

**B. Why did you attend these extra lessons or tutoring?**

*Fill **one** circle for each line.*

- |                                       | Yes                              | No                    |
|---------------------------------------|----------------------------------|-----------------------|
| a) To excel in class .....            | <input checked="" type="radio"/> | <input type="radio"/> |
| b) To keep up in class .....          | <input type="radio"/>            | <input type="radio"/> |
| c) To do well on an examination ..... | <input type="radio"/>            | <input type="radio"/> |

**C. For how many of the last 12 months have you attended extra lessons or tutoring in advanced mathematics?**

*Fill **one** circle only.*

Less than 4 months --

4-8 months --

More than 8 months --



# 18

How much do you agree with these statements about your advanced mathematics lessons?

Fill **one** circle for each line.

	Agree a lot	Agree a little	Disagree a little	Disagree a lot
a) The teacher clearly communicates the purpose of each mathematics lesson .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) I know what my teacher expects me to do .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) My teacher is easy to understand ..	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) I am interested in what my teacher says .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) My teacher gives me interesting things to do .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) My teacher asks me thought provoking questions .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g) My teacher has clear answers to my questions .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h) My teacher links new content to what I already know .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

# 18 (continued)

How much do you agree with these statements about your advanced mathematics lessons?

Fill **one** circle for each line.

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

# 19

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**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.*

- |  | Yes                   | No                    |
|--|-----------------------|-----------------------|
| a) Access the textbook or other course materials .....   | <input type="radio"/> | <input type="radio"/> |
| b) Access assignments posted online by my teacher .....  | <input type="radio"/> | <input type="radio"/> |
| c) Collaborate with classmates on mathematics assignments or projects .....                    | <input type="radio"/> | <input type="radio"/> |
| d) Communicate with the teacher .....  | <input type="radio"/> | <input type="radio"/> |
| e) Discuss mathematics topics with other students .....  | <input type="radio"/> | <input type="radio"/> |
| f) Find information, articles, or tutorials to aid in understanding mathematics concepts ..... | <input type="radio"/> | <input type="radio"/> |
| g) Find information, articles, or tutorials to aid in solving mathematics problems .....       | <input type="radio"/> | <input type="radio"/> |

# 20

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

*Fill **one** circle for each line.*

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

# 21

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

Fill **one** circle for each line.

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

## 22

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

Fill **one** circle for each line.

	Agree a lot	Agree a little	Disagree a little	Disagree a lot
a) I enjoy school .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) I feel safe when I am at school .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) I feel like I belong at this school .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) I like to see my classmates at school .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) Teachers at my school are fair to me .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) I am proud to go to this school .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g) I learn a lot in school .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h) My classmates respect students who excel in school subjects .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i) My classmates respect students who struggle learning school subjects .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

# 23

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 .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Excluded me from their activities ..	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Spread lies about me .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Stole something from me .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) Hit or hurt me (e.g., shoving, hitting, kicking) .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) Made me do things I didn't want to do .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g) Posted embarrassing things about me online .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h) Threatened me .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Thank You!**

Thank you for filling out the questionnaire!



BOSTON  
COLLEGE

**TIMSS**  
*Advanced*  
**2015**

TRENDS IN INTERNATIONAL MATHEMATICS AND SCIENCE STUDY

# Student Questionnaire Advanced Mathematics



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