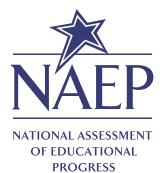


GRADE 8

MATHEMATICS | READING | SCIENCE

Sample Questions

General Information About The Nation's Report Card



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2015	SECTION	Mathematics
2015	1 MXX	- Book

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Grade 8

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National Assessment of Educational Progress

2015 Grade 8 Sample Questions Booklet

I.	About This Sample Questions Booklet4
II.	The Assessments
	Mathematics
	Booklet Directions6
	Sample Questions
	Reading9
	Booklet Directions
	Sample Questions
	Science
	Booklet Directions18
	Sample Questions
III.	Contextual Questionnaire
IV.	Subject Questionnaires
	Mathematics
	Reading
	Science40
V.	Enhanced NAEP Questions Tool
۷I.	About NAEP

I. About This Sample Questions Booklet

On behalf of the National Assessment of Educational Progress (NAEP), I want to thank you for your participation in this essential measure of student achievement in the United States. NAEP tells us what students in our country know and can do. In the coming year, fourth-, eighth-, and twelfth-graders will participate in NAEP assessments in mathematics, reading, and science. Assessments require about 90 minutes of a student's time, and each student answers questions in only one subject. The test booklet contains 50 minutes of test questions and brief contextual questionnaires.

NAEP results are reported for the nation, states, and selected large urban districts, but not for individual schools or students. Answers to all student questions are confidential, and student names are removed from all assessment materials before leaving the school. Results of the 2015 mathematics, reading, and science assessments will be reported as The Nation's Report Card. Assessment results are widely discussed in the press and are used by elected officials, policymakers, educators, and researchers to make decisions about education policy and funding.

The national assessment results are more useful when parents, educators, and policymakers are able to study the proficiencies (or scores) and gain information about student experience, the school environment, and learning opportunities available to students. The questionnaires provide educators and policymakers with contextual information for the assessment, as well as information about factors related to students' learning. This booklet includes these questionnaires as well as sample questions for mathematics, reading, and science in order to promote understanding of the assessment.

If you have any questions or comments regarding NAEP or would like to view previous report cards, please visit the NAEP website at http://nces.ed.gov/nationsreportcard. Also available through the website is the NAEP Questions Tool (http://nces.ed.gov/nationsreportcard/nqt), which allows you to review additional sample questions with sample answers.

Peggy G. Carr, Ph.D. Acting Commissioner National Center for Education Statistics Institute of Education Sciences Mathematics—Grade 8 5

II. The Assessments

Each NAEP assessment is built around an organizing framework, which is the blueprint that guides the development of the assessment. The National Assessment Governing Board oversees the development of the NAEP frameworks, which describe the specific knowledge and skills to be assessed in each subject. Frameworks incorporate ideas and input from subject area experts, school administrators, policymakers, teachers, parents, and others.

Mathematics

Grade 8

The 2015 NAEP mathematics assessment measures students' ability to solve problems in five mathematics content strands: Number Properties and Operations; Measurement; Geometry; Data Analysis, Statistics, and Probability; and Algebra. Within each of these five content strands, students are asked questions of low, moderate, or high mathematical complexity. Mathematical complexity is a measure of the level of demand placed on a student's thinking in order to answer a question correctly.

The NAEP mathematics assessment includes multiple-choice, short constructed-response, and extended constructed-response questions. The short and extended constructed-response questions allow students to communicate their ideas and demonstrate the reasoning they used to solve problems. The short constructed-response and extended constructed-response questions combined make up approximately 50 percent of student assessment time. The assessment also incorporates the use of calculators, rulers, protractors, and other ancillary materials such as geometric shapes, in some parts of the assessment, but not all.

Calculator use is permitted on approximately 30 percent of the test questions. At grade 8, students may use their own scientific or graphing calculator, with some restrictions for test security purposes. (Students who do not bring their own calculator are provided with a scientific calculator.) These items are designed so that students who bring their own graphing calculators are not at an advantage compared to students who use the scientific calculator provided by NAEP. For more information regarding the mathematics assessment framework, please visit the Governing Board's website at www.nagb.org/publications/frameworks.htm.

NAEP Mathematics Framework Distribution of Questions Across Content Strands

Number Properties and Operations	20%
Measurement	15%
Geometry	20%
Data Analysis, Statistics, and Probability	15%
Algebra	30%

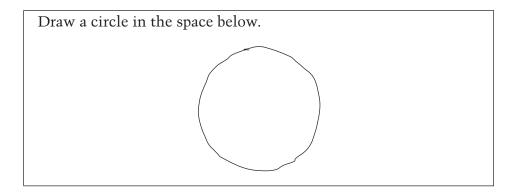
6 Mathematics—Grade 8

Booklet Directions

This assessment uses many different booklets. Each booklet has different questions. Do not worry if the person next to you is working on questions that do not look like those you are working on.

Read each question carefully and answer it as well as you can. Do not spend too much time on any one question.

For some of the questions you may need to write or draw the answer. You can see how this is done in the example below.



You may be permitted to use a calculator for at least one part of your booklet. You may use either your own calculator or the calculator provided by NAEP. If you are permitted to use a calculator, you will have to decide when to use it in each section where its use is permitted. For some questions using the calculator is helpful, but for other questions the calculator may not be helpful.

If you are using the calculator provided by NAEP, make sure you know how to use it. There are instructions on the back cover of this booklet to help you. If the calculator does not work or if you do not know how to use it, raise your hand and ask for help.

REMEMBER:

Read each question CAREFULLY.

Fill in only ONE OVAL for each question or write your answer in the space provided.

If you change your answer, ERASE your first answer COMPLETELY.

CHECK OVER your work if you finish a section early.

Do not go past the STOP sign at the end of each section until you are told to do so.



Mathematics—Grade 8

Sample Questions

Grade 8

The following sample questions and correct student responses are available on the NAEP Questions Tool. For additional sample questions and responses, visit http://nces.ed.gov/nationsreportcard/nqt/.

- 1. Which of the following numbers is twenty-three and eight-thousandths?
 - ② 230.8
 - **3** 23.8
 - © 23.08
 - **2**3.008
 - © 23.0008
- 2. On average, thunder is heard in Tororo, Uganda, 251 days each year. What is the probability that thunder will be heard in Tororo on any day? (1 year = 365 days)

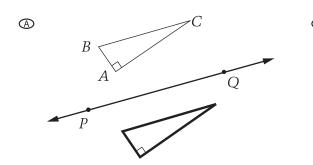
Give your answer to the nearest percent.

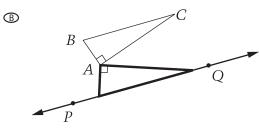
$$\frac{251}{365} = \frac{x}{100}$$

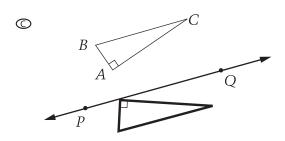
$$365x = 25100$$

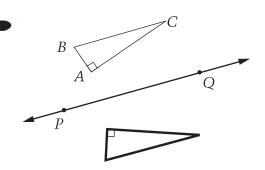
8 Mathematics—Grade 8

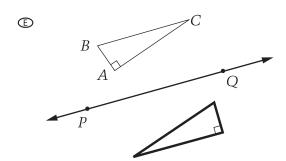
3. Which of the following figures shows the reflection of triangle *ABC* over line *PQ*?













Reading

Grade 8

The 2015 NAEP reading assessment measures students' ability to understand, to interpret, and to think critically about grade-appropriate texts. Recognizing that readers vary their approach according to the demands of different types of text, the NAEP framework specifies the assessment of reading in two major text types—literary text and informational text. The assessment includes reading materials selected from publications and other resources typically available to students in and out of school.

The reading framework for the NAEP reading assessment conceptualizes reading as a dynamic cognitive process. The framework includes

- an assessment design based on current scientific reading research,
- a focused measurement of vocabulary, and
- objective measurements of reading behaviors (cognitive targets).

The NAEP reading assessment contains multiple-choice questions, as well as short and extended constructed-response questions. Students spend approximately 50 percent of their assessment time providing written answers to constructed-response questions. For more information regarding the reading assessment framework, please visit the Governing Board's website at http://www.nagb.org/publications/frameworks.htm.

NAEP Reading Framework Distribution of Question Pool Across Contexts

Literary text	45%
Informational text	55%

Booklet Directions

In each of the next two sections, you will have 25 minutes to read one or two passages and to answer questions about what you have read.

You will be asked to respond to two types of questions. The first type of question requires you to choose the best answer and fill in the oval for that answer in your booklet. Some questions of this type will ask you about the meaning of a word as it is used in the passage.

The other type of question requires you to write your answer on the blank lines in your booklet. Some questions of this type will ask you to write a short answer and some questions will ask you to write a longer answer.

Here is an example of a question that requires you to write a short answer.

Do you think "Summer Adventure" was a good title for the story? Explain why or why not using details from the story.

I think "Summer Adventure"
was a good title for the
story because the main
character, Joe, got to go
on a trip to Alaska
where he saw Mt. McKinley.

Here is an example of a question that requires you to write a longer, more detailed answer.

Joe has different feelings during his trip in Alaska. Describe two different feelings Joe had and explain what caused him to have those feelings.

Joe was lonely when he
first arrived in Alaska
because he was missing
his friends back home,
but then he met Jerry
and Pat and felt better.
When Jerry's parents
took them all to
Portage Lake, Joe felt
excited because they
went on a boat ride
across a lake filled
with icebergs to see the
blue glacier.

Think carefully about each question. When you are writing your response, make your answer as complete as possible. Be sure your handwriting is clear. Use as many lines as you need.

You may go back to the passage when answering the questions.

If you finish before time is called, read over your work to be sure you have provided your best answer.



Sample Questions

Grade 8 Reading Selection

Tech-Trash Tragedy

by Liam O'Donnell

In our wired world, technology moves at a laser-fast pace. Every day, a new gadget arrives and promises to bring us the future, today. In the race for faster computers and more-powerful gadgets, it's easy to forget about yesterday's high-tech wonders.

Unfortunately, used computers and gadgets end up in landfills across the country. Each year, we throw away 12 million computers. And that is not good news for the environment. To make our gadgets work, many of them use materials like lead and mercury. When mercury and lead end up in a landfill, they spread poisons into the earth, water, and air for miles around. This is called e-waste—and it's becoming a big pollution problem around the world.

Big problems call for big solutions, so adults and kids from dozens of countries are working hard to clean up our e-waste. And *you* can help, too.

Turning Old Into New

The trick to stopping e-waste is to catch it before it gets into the landfill. That's why some seventh-grade students at a school in Michigan organized a computer drop-off event. They put up posters and spread the word around the town, telling people to bring out their old computers.

And the people got the message. They dropped off dozens of old computers,

monitors, and printers at the school. Craig Greshaw, the school's computer teacher who helped organize the event, believes that knowing about computers goes beyond surfing the Web. "Part of that is learning about the chemicals inside the computers and what needs to be done with them to keep them safe," he told the town newspaper during the recycling drive. With their school gym filled with old computers, the students were ready for the next step in cleaning up the high-tech trash: turning old computers into new ones.

That's where companies like RePC step in. The Seattle company takes e-waste and turns it into e-gold. "Almost all of the parts of a computer can be reused or recycled," says Mark Dabek, owner of RePC. Any computer parts that can't be reused or sold get recycled in a way that won't hurt the environment. "The circuit boards are sent to a circuit board recycler that chops them and sends them to a facility with a very, very hot furnace called 'the reactor,'" Dabek says. After the computer parts are safely crushed and burned, their raw materials can be reused to make everything from appliances to office buildings.

Sometimes you can make a new computer from the parts of an old computer. Called refurbishing, it's what

GO ON TO THE NEXT PAGE



Out with the old and in with the new! Look how it piles up!

the tech whizzes at RePC do best. Buying a refurbished computer is a lot cheaper than buying a new one. But who wants a computer made up of old parts?

A lot of people, actually. Places like schools and community centers are often short on cash, but need computers to help them get things done. Robert Sterling, a computer teacher at a high school in California, uses computers donated from local businesses to motivate students and teach them about recycling. "If kids learn to recycle everything," says Sterling, "they will set a good example for some of the older people who are not in the habit yet of recycling every day."

Recycling old computers is big business, and there are many other companies like RePC across the country. Many big charities have computer-recycling programs too, but be sure to call them first before you drop off any equipment.

Computers aren't the only technology that can be reused. Last year, schools in New Mexico gave old cell phones a new lease on life while also helping to raise money for charity. The students collected eleven garbage bags of old cell phones, sold them to a cell phone refurbishing company, donated the money to charity, and helped keep the environment clean—all at the same time.

Building a Greener Future

Some computer makers are tackling tech trash by designing more environmentally responsible products. More new computers are made with recycled plastic and use less electricity. Many also have no lead in their circuits,

which makes them less damaging to the environment. The same goes for those new flat monitors. Not only do they look cool, but they also use less-harmful chemicals.

Computers are an important part of our wired world. It's up to us to make sure that they don't pollute our planet. Talking to others about e-waste is a great way to

start tackling the problem. Speak to your teacher about organizing a computer collection drive at your school. Next time your baseball team is raising money, try collecting old cell phones. By working together for a clean future, we can make e-waste a thing of the past.

From *ODYSSEY'S* September 2004 issue: Wired, Wired World, © 2004, Carus Publishing Company, published by Cobblestone Publishing, 30 Grove Street, Suite C, Peterborough, NH 03458. All Rights Reserved. Used by permission of the publisher.

The following sample questions and correct student responses are available on the NAEP Questions Tool. For additional sample questions and responses, visit http:// nces.ed.gov/nationsreportcard/nqt/.

- **1.** Which of the following does the author primarily use to persuade his readers to help fight e-waste?
 - Real-world examples
 - ® Interviews with scientists
 - © Comparison and contrast
 - Historical context

2.	Based on what you have read in this article, do you think the problem of tech trash will be difficult to solve? Explain your answer using two references to the article.
	I do think it will be difficult to solve because like
	the article said, we throw away around 12 million
	computers a year. I think it will take a long time
	to solve, but we will be able to do it.
	•



Science

Grade 8

The 2015 NAEP science assessment contains selected-response (multiple-choice) questions, as well as short and extended constructed-response questions. At least 50 percent of the assessment time is devoted to constructed-response questions. These questions measure students' knowledge of facts, ability to integrate this knowledge into larger constructs, and capacity to use the tools, procedures, and reasoning processes of science to develop an increased understanding of the natural world.

The 2015 NAEP science assessment is organized according to science content and practices in the NAEP science framework. For more information regarding the science assessment framework, please visit the Governing Board's website at http://www.nagb .org/publications/frameworks.htm.

Science Content

Physical Science (30%)*	Life Science (30%)*	Earth and Space Science (40%)*
Matter	Structures and Functions of Living Systems	Earth in Space and Time
Properties of matter	Organization and development	Objects in the universe
Changes in matter	Matter and energy transformations	History of the Earth
Energy	Interdependence	Earth Structures
Forms of energy	Changes in Living Systems	 Properties of Earth materials
Energy transfer and conservation	Heredity and reproduction	Tectonics
Motion	Evolution and diversity	Earth Systems
Motion at the macroscopic level		Energy in Earth systems
Forces affecting motion		Climate and weather
		Biogeochemical cycles

 $[\]boldsymbol{\ast}$ Item distribution for the content areas is measured by percentage of student response time.

Science Practices

The framework reflects these four science practices**:

- Identifying Science Principles (25%)
- Using Science Principles (35%)
- Using Scientific Inquiry (30%)
- Using Technological Design (10%)

 $[\]ast\ast$ Item distribution for the science practices is measured by percentage of student response time.

Booklet Directions

In each of sections 1 and 2, you will have 25 minutes to answer a series of questions about science.

You will be asked to respond to several different types of questions. Some of the questions will require you to choose the best answer and fill in the oval for that answer in your booklet. On questions like this, be sure to mark your answers clearly and darken the oval completely. If you make a mistake or want to change your answer, be sure to erase any unwanted marks. Here is an example of a question that requires you to fill in an oval.

Example 1

How hot is it on the surface of the Sun?

- Not quite as hot as boiling water
- About as hot as fire
- © About 100°F
- Much hotter than almost anything on Earth

For some questions, you will be asked to write short answers on the blank lines provided in your booklet. Here is an example of a question that requires you to provide a short answer.

Example 2

Describe one important difference between plants and animals.

Most plants make their own food, while animals eat plants and other animals for food.

Also, you will be asked to answer some questions by writing longer, more detailed responses. For example, here is a question that requires you to provide a longer answer.

Example 3

Describe three things that animals do to survive in areas that have cold winters.

of fat so that they can go into a deep sleep all winter.
Some animals grow a thick coat of fur to keep them warm. Some birds and butterflies fly away from a cold area and spend the winter in a place that is warm and has a lot of food.

When you are asked to write your response be sure that your handwriting is clear. Think carefully about each question and make your answers as complete as possible, using as many lines as you need. If you finish a section before time is called, you may go back and check your work on that section only.

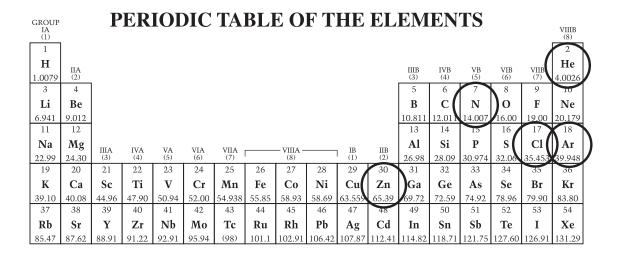
Finally, in some questions you may be asked to draw a diagram or fill in a table.



Sample Questions

Grade 8

The following sample questions and correct student responses are available on the NAEP Questions Tool. For additional sample questions and responses, visit http://nces.ed.gov/nationsreportcard/nqt/.

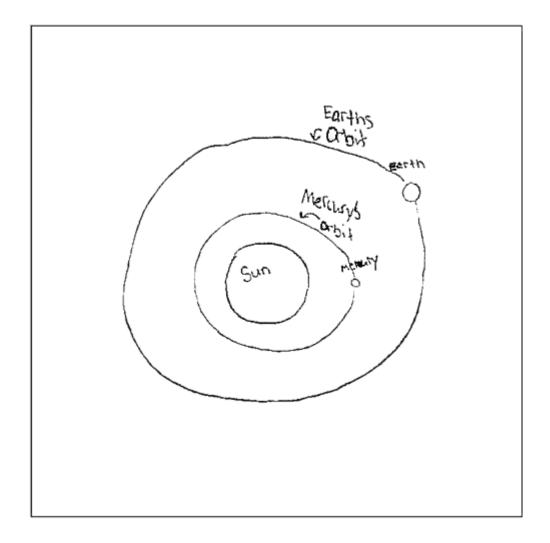


Element	Symbol
Argon	Ar
Chlorine	C1
Helium	Не
Nitrogen	N
Zinc	Zn

- 1. Based on its location on the partial periodic table shown above, which element would you predict has chemical properties that are most similar to argon (Ar)?
 - Chlorine (Cl)
 - Helium (He)
 - O Nitrogen (N)
 - © Zinc (Zn)

2. Mercury is the planet closest to the Sun. In the box below, draw a diagram showing each of the following. Label all parts of your diagram.

- Earth
- Mercury
- Sun
- Orbits

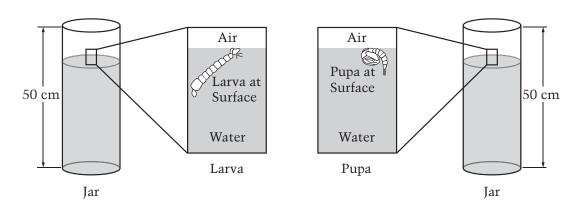


This question refers to the following investigation.

Some students were studying the life cycle of mosquitoes. They learned that mosquito larvae and pupae spend part of their time at the surface of water.

The students wanted to find out how a larva and pupa behaved when the jars they were in were disturbed. They put one larva and one pupa in identical tall jars of water at 20°C as shown below.





The students tapped on the jars when the larva and pupa were at the surface of the water. The larva and pupa dove down into the jars, and then slowly came to the surface.

The students measured the depth each larva and pupa reached and the amount of time each stayed underwater. The students repeated this step five times and calculated the average of each of their measurements.

Their results are summarized in the table below.

DATA TABLE

	Larva		Pupa		
Number of Trials	Average Depth Reached (centimeters)	Average Length of Time Underwater (seconds)	Average Depth Reached (centimeters)	Average Length of Time Underwater (seconds)	
5	22	90	38	120	

3. Larvae and pupae normally float. They must use their muscles in order to dive down through water. What type of energy is used by the muscles?

- Sound energy from the air
- ® Thermal energy from the water
- Chemical potential energy from their cells
- © Gravitational potential energy from Earth



III. Contextual Questionnaire

Grade 8

DIRECTIONS

In the next two sections, you will be asked questions about yourself and your education. The choices for some questions will be written across the page as shown. Fill in the oval for the best answer.

Example 1

	Never or hardly ever	Once or twice a month	Once or twice a week	Almost every day
1. How often do you watch movies on TV?	(A)	B	©	(D)

You should have filled in the oval below the answer that best tells how often you watch movies on TV.

The choices for some questions will be written down the page as shown. Now read Example 2 and indicate your answer.

Example 2

2. Which event would you prefer to attend?
⑤ basketball game
⑥ car show
⑥ concert
⑤ play

Make your answer mark clear and dark in the oval. If you make a mistake or want to change your answer, be sure to completely erase any unwanted marks.

Do not go past the STOP sign at the end of each section until you are told to do so.

If you finish before time is called, go back and check your work on that section only. Use your time carefully. Do as much as you can in each section.

Y23BD

In this section, please tell us about yourself and your family. Please answer questions about your home based on where you live most of the time during the school year. The section has 13 questions. Mark your answers in your booklet. Fill in only **one** oval for each question except where instructed otherwise.

VB331330

- 2. Which of the following best describes you? Fill in **one or more ovals**.
- 1. Are you Hispanic or Latino? Fill in **one or more ovals**.
 - No, I am not Hispanic or Latino.
 - ® Yes, I am Mexican, Mexican American, or Chicano.
 - © Yes, I am Puerto Rican or Puerto Rican American.
 - Yes, I am Cuban or Cuban American.
 - © Yes, I am from some other Hispanic or Latino background.

- White
- ® Black or African American
- O Asian
- © Native Hawaiian or other Pacific Islander

- 3. About how many books are there in your home?
 - **⚠** Few (0–10)
 - ® Enough to fill one shelf (11–25)
 - © Enough to fill one bookcase (26–100)
 - © Enough to fill several bookcases (more than 100)

VB331336

- 4. Is there a computer at home that you use?
 - A Yes
 - ® No

VF098664

- 5. Do you have the following in your home? Fill in ovals for **all** that apply.
 - Access to the Internet
 - ® Clothes dryer just for your family
 - © Dishwasher
 - More than one bathroom
 - © Your own bedroom

TB001101

- 6. About how many pages a day do you have to read in school and for homework?
 - ♠ 5 or fewer
 - **®** 6-10
 - © 11-15
 - © 16-20
 - (1) More than 20

VB331330

- 7. How often do you talk about things you have studied in school with someone in your family?
 - Never or hardly ever
 - ® Once every few weeks
 - About once a week
 - Two or three times a week
 - © Every day

VB331447

- 8. How many days were you absent from school in the last month?
 - None
 - ® 1 or 2 days
 - © 3 or 4 days
 - ① 5 to 10 days
 - More than 10 days

J2D1

- 9. How far in school did your mother go?
 - She did not finish high school.
 - ® She graduated from high school.
 - © She had some education after high school.
 - She graduated from college.
 - © I don't know.

VB330871

- 10. How far in school did your father go?
 - He did not finish high school.
 - B He graduated from high school.
 - © He had some education after high school.
 - He graduated from college.
 - © I don't know.

VB33145

- 11. How often do people in your home talk to each other in a language other than English?
 - Never
 - ® Once in a while
 - About half of the time
 - All or most of the time

VF095730

- 12. Do the following people live in your home? Fill in ovals for **all** that apply.
 - Mother
 - Stepmother
 - © Foster mother or other female legal guardian
 - Tather
 - © Stepfather
 - © Foster father or other male legal guardian

VE102537

13. Write the ZIP	code	of your	home	address
in the boxes.		,		

1 1	1 1	1
1 1	1 1	1
1 1	1 1	1





IV. Subject Questionnaires

Mathematics

Grade 8

This section has 15 questions. Mark your answers in your booklet. Fill in only **one** oval for each question except where instructed otherwise.

for each question except where instructed other	rwise.
VB543277	VB543278
1. What math class are you taking this year?	2. What math class do you expect to take next year?
Geometry	⊕ Geometry
Algebra II	Algebra II
O Algebra I (one-year course)	© Algebra I (one-year course)
First year of a two-year Algebra I course	First year of a two-year Algebra I course
© Second year of a two-year Algebra I course	© Second year of a two-year Algebra I course
Introduction to algebra or pre-algebra	⑤ Introduction to algebra or pre-algebra
© Basic or general eighth-grade math	© Basic or general math
Integrated or sequential math	⊕ Integrated or sequential math
① Other math class	Business or consumer math
	① Other math class
	✓ I don't know.

VC497572

3. How often do you feel the following way in your math class? Fill in **one** oval on each line.

	Never or hardly ever	Sometimes	Often	Always or almost always	
a. I have a clear understanding of what my math teacher is asking me to do.	A	®	©	•	VC497573
b. The math work is too easy.	A	®	©	(D)	VC497574
c. The math work is challenging.	lack	®	0	(VC497575
d. The math work is engaging and interesting.	(A)	®	©	•	VC497576
e. I am learning.	A	®	©	(VC497577

VC189706

4. Please indicate how much you DISAGREE or AGREE with the following statements. Fill in **one** oval on each line.

	Strongly disagree	Disagree	Agree	Strongly agree	
a. Because math is fun, I wouldn't want to give it up.	A	®	©	•	VC189707
b. I like math.	A	®	©	•	VC189710
c. Math is one of my favorite subjects.	A	B	0	(VC189711

5. How often do you use these different types of calculators in your math class?

	Never use	Sometimes, but not often	Usually use	
a. Basic four-function (addition, subtraction, multiplication, division)	A	®	©	VB517160
b. Scientific (not graphing)	A	$^{ ext{ B}}$	0	VB517161
c. Graphing	A	®	©	VB517282

VB51715

- 6. When you take a math test or quiz, how often do you use a calculator?
 - Never
 - Sometimes
 - © Always

7. For each of the following activities, how often do you use a **calculator**? Fill in **one** oval on each line.

	Never or hardly ever	Once every few weeks	About once a week	Two or three times a week	Every day or almost every day	
a. To check your work on math homework assignments	(A)	®	©	•	Ē	VB543270
b. To calculate the answers to math homework problems	(A)	®	©	•	(Ē)	VB543271
c. To work in class on math lessons led by your teacher	A	®	©	0	Ē	VB543272

VB543267 VB525162

- 8. What kind of **calculator** do you usually use when you are **not in math class**?
 - A None
 - Basic four-function (addition, subtraction, multiplication, division)
 - © Scientific (not graphing)
 - Graphing

- 9. How often do you use a computer for math at school?
 - Never or hardly ever
 - Once every few weeks
 - About once a week
 - Two or three times a week
 - © Every day or almost every day

10. When you are doing math for school or homework, how often do you use these **different types of computer programs**? Fill in **one** oval on each line.

	Never or hardly ever	Once every few weeks	About once a week	Two or three times a week	Every done or almo	st
a. A spreadsheet program for math class assignments	A	®	©	•	Œ	VB543157
b. A program to practice or drill on math facts (addition, subtraction, multiplication, division)	(A)	₿	©	•	Œ	VB543158
c. A program that presents new math lessons with problems to solve	(A)	B	©	•	Œ	VB543160
d. The Internet to learn things for math class	A	®	©	0	Œ	VB543159
e. A calculator program on the computer to solve or check problems for math class	(A)	®	©	•	©	VB543161
f. A graphing program on the computer to make charts or graphs for math class	(A)	®	©	•	(E)	VB543262
g. A statistical program to calculate patterns such as correlations or cross tabulations	(A)	B	©	((E)	VB517157
h. A word processing program to write papers for math class	A	®	©	0	Œ	VB543156
i. A program to work with geometric shapes for math class	(A)	®	©	0	Œ	VC466133

VC189613

11. How often do you use e-mail, instant messages, blogs, or text messages to do any of the following? Fill in **one** oval on each line.

	Never or hardly ever	Once every few weeks	About once a week	Two or three times a week	Every day or almost every day	
a. Talk online with friends about math work	(A)	®	©	•	Ē	VC299268
b. Get help with math from someone other than your teacher, family, classmates, or friends	A	(B)	©	(1)	Œ	VC189627

VF017602

VC034559

- 12. How often do you receive help or tutoring with math outside of school or after school?
 - Never or hardly ever
 - ® Once or twice a month
 - Once or twice a week
 - Every day or almost every day

- 14. How hard did you try on this test compared to how hard you tried on most other tests you have taken this year in school?
 - Not as hard as on other tests
 - About as hard as on other tests
 - Harder than on other tests
 - Much harder than on other tests

VB595182

- 13. How hard was this test compared to most other tests you have taken this year in school?
 - Easier than other tests
 - About as hard as other tests
 - © Harder than other tests
 - Much harder than other tests

VB595184

- 15. How important was it to you to do well on this test?
 - Not very important
 - Somewhat important
 - © Important
 - O Very important



This section has 13 questions. Mark your answers in your booklet. Fill in only **one** oval for each question except where instructed otherwise.

VB345622

1. Please indicate how much you DISAGREE or AGREE with the following statements about reading and writing. Fill in one oval on each line.							
	Strongly disagree	Disagree	Agree	Strongly agree			
a. When I read books, I learn a lot.	(A)	®	©	•	VB345623		
b. Reading is one of my favorite activities.	lack	®	©	(VB345624		

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VB379288

VE633189

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2. How often do you do each of the following? Fill in **one** oval on each line.

	Never or hardly ever	Once or twice a month	Once or twice a week	Almost every day	
a. Read for fun on your own time	(A)	®	0	© VB379289	9
b. Talk with your friends or family about	(A)	®	©	© VB379290	0

VB345644

3. Now think about reading and writing you do for school. For your **English** class this year, how often do you do each of the following? Fill in **one** oval on each line.

	Never or hardly ever	A few times a year	Once or twice a month	At least once a week
a. Have a class discussion about something that the whole class has read	(A)	®	©	O VB345645
b. Work in pairs or small groups to talk about something that you have read	(A)	®	©	© VB345646

c. Reading is enjoyable.

4. For your **English** class so far this year, how many times have you done each of the following? Fill in **one** oval on each line.

	Never	Once	2 or 3 times	4 or 5 times	6 or more times	
a. Made a presentation to the class about something that you have read	(A)	B	©	0	Œ	VB345650
b. Done a project about something that you have read (for example, written a play, created a website)	(A)	B	©	(D)	(E)	VB345651
c. Conducted research for reading and writing projects	(A)	B	©	0	Œ	VF009263

VF174671 VB345715

- 5. How often do you receive help or tutoring with English/language arts outside of school or after school?
 - A Never or hardly ever
 - ® Once or twice a month
 - Once or twice a week
 - D Every day or almost every day

- 6. For school this year, how often have you been asked to write long answers to questions on tests or assignments that involved reading?
 - Never
 - ® Once or twice this year
 - Once or twice a month
 - At least once a week

VC504013

7. In your English/language arts class this year, how often does your class do each of the following? Fill in **one** oval on each line.

	Never or hardly ever	Once or twice a month	Once or twice a week	Every day or almost every day	
a. Read aloud	A	®	©	(D)	VC504014
b. Read silently	A	®	©	(D)	VC504015
c. Discuss new or difficult vocabulary	(A)	B	©	(D)	VC504016
d. Explain what we have read	A	®	©	(D)	VC504017
e. Read books we have chosen ourselves	(A)	B	©	(D)	VC504019
f. Write a paragraph or more about what we have read	A	B	0	•	VE589602

VF009272

8. In your English/language arts class this year, when reading a story, article, or other passage, how often does your teacher ask you to do the following? Fill in **one** oval on each line.

	Never or hardly ever	Once or twice a month	Once or twice a week	I don't know.	
a. Evaluate the main arguments or evidence in a persuasive passage	(A)	®	©	•	VF009274
b. Analyze the author's organization of information in a passage	(A)	®	©	•	VF009276
c. Critique the author's craft or technique	(A)	®	0	•	VF009279

VC504022

9. In your English/language arts class this year, when reading a story, article, or other passage, how often does your teacher ask you to do the following? Fill in **one** oval on each line.

	Never or hardly ever	Once or twice a month	Once or twice a week	Every day or almost every day	
a. Summarize the passage	A	®	©	(D)	VC504023
b. Interpret the meaning of the passage	A	®	O	(VC504024
c. Question the motives or feelings of the characters	(A)	B	©	0	VC504025
d. Identify the main themes or main ideas of the passage	A	$^{ ext{ B}}$	©	•	VE589611

10. In your English/language arts class this year, how often do you use a computer to do each of the following? Fill in **one** oval on each line.

	hardly ever	twice a month	twice a week	or almost every day	
a. Learn and practice vocabulary	(A)	®	©	(D)	VC504028
b. Practice spelling and grammar	(A)	B	©	(D)	VC504029
c. Access reading-related websites (for example, websites with book reviews and lists of recommended books)	(A)	B	©	•	VC504033
d. Conduct research for reading and writing projects	(A)	®	0	•	VC504034
e. Read books or articles using a computer or other digital technology	A	$^{ ext{ B}}$	©	0	VH075681

VB595182

/C034559

- 11. How hard was this test compared to most other tests you have taken this year in school?
 - Easier than other tests
 - About as hard as other tests
 - Harder than other tests
 - Much harder than other tests

- 12. How hard did you try on this test compared to how hard you tried on most other tests you have taken this year in school?
 - Not as hard as on other tests
 - About as hard as on other tests
 - © Harder than on other tests
 - Much harder than on other tests

VB595184

- 13. How important was it to you to do well on this test?
 - Not very important
 - ® Somewhat important
 - © Important
 - O Very important



Science

Grade 8

This section has 19 questions. Mark your answers in your booklet. Fill in only **one** oval for each question except where instructed otherwise.

VC304978

1. In your science class this year, which of the following topics have been covered? Fill in **one** oval on each line.

	Yes	No	
a. Life science (for example, biology, the human body, or ecology)	A	₿	VC304982
b. Physical science (for example, energy, physics, or chemistry)	A	₿	VC304983
c. Earth and space science (for example, geology or astronomy)	A	₿	VC304984
d. Engineering and technology (for example, designing solutions to problems)	(A)	B	VC304985

VF633079

2. In your science class this year, how often have you done hands-on activities or projects with any of the following? Fill in **one** oval on each line.

	Never	Rarely	Sometimes	Often	
a. Living things (for example, plants, animals, bacteria)	(A)	®	©	0	VF633080
b. Electricity (for example, circuits, batteries, and light bulbs)	(A)	B	©	0	VF633083
c. Chemicals (for example, mixing or dissolving sugar or salt in water)	(A)	B	©	0	VF633082
d. Rocks or minerals (for example, identifying types)	(A)	B	©	0	VF633087
e. Simple machines (for example, pulleys and levers)	(A)	B	0	0	VF633086
f. Magnifying glass or microscope (for looking at small things)	(A)	B	0	0	VF633084
g. Thermometer or barometer (for making measurements)	A	®	0	0	VF633085

3. In your science class this year, how often do you do each of the following? Fill in **one** oval on each line.

	Never or hardly ever	Once every few weeks	About once a week	Two or three times a week	Every day or almost every day	
a. Read a science textbook, in class or at home	A	₿	0	0	(E)	VC546510
b. Read a book or magazine about science topics	(A)	₿	0	0	Œ	VF633095
c. Use the Internet to learn about science topics	(A)	₿	©	0	©	VF633097
d. Watch a movie, video, or DVD about science topics	A	®	0	0	(E)	VF633099

VC304769

4. In your science class this year, how often do you do each of the following? Fill in **one** oval on each line.

	Never or hardly ever	Once every few weeks	About once a week	Two or three times a week	Every day or almost every day	
a. Discuss events in the news that are related to what you are learning in science class	(A)	®	©	•	(E)	VC304771
b. Work with other students on a science project or activity	(A)	®	©	•	©	VC304772
c. Present what you learned about science to your class	A	®	0	0	(E)	VC304778
d. Take a science test or quiz	(A)	$^{\odot}$	©	•	Œ	VC720564

5. In your science class this year, how often do you do each of the following? Fill in **one** oval on each line.

	Never or hardly ever	Once every few weeks	About once a week	Two or three times a week	Every day or almost every day	
a. Identify questions that can be addressed through science experiments	(A)	®	©	•	Œ.	VC720623
b. Design a science experiment	A	®	0	0	Œ	VC720634
c. Talk about measurements you took for your science project or activity	(A)	®	O	0	Œ)	VC720635
d. Talk about the results of your science project or activity	(A)	®	O	0	(E)	VC720636
e. Watch your teacher do a science experiment or activity	(A)	®	0	0	Œ	VC720638
f. Make graphs or charts of the results from your science project or activity	(A)	®	0	0	Œ	VC720639
g. Write about your science activities or projects (such as reports, science journals, or lab write-ups)	(A)	(B)	0	0	(E)	VF633111

VH142438

- 6. In this school year, how often have you been asked to write long answers (several sentences or paragraphs) to questions on tests or assignments for science?
 - Never or hardly ever
 - ® Once every few weeks
 - About once a week
 - Two or three times a week
 - © Every day or almost every day

VC546453

- 7. In this school year, how often have you talked with your teacher about how you are doing in science?
 - Never or hardly ever
 - ® Once every few weeks
 - About once a week
 - Two or three times a week
 - © Every day or almost every day

VH157884

- 8. In this school year, how often have you used your school library or media center resources for science (such as books, magazines, computers, and audio-video materials)?
 - Never or hardly ever
 - ® Once every few weeks
 - About once a week
 - Two or three times a week
 - © Every day or almost every day

VC546463

- 9. In this school year, how often have you used computers for science?
 - Never or hardly ever
 - ® Once every few weeks
 - About once a week
 - Two or three times a week
 - © Every day or almost every day

- 10. How often do you feel you can understand what the teacher talks about in science class?
 - Never or hardly ever
 - Sometimes
 - © Often
 - Always or almost always

VC315292

- 11. How often do you feel you can do a good job on your science tests?
 - Never or hardly ever
 - ® Sometimes
 - © Often
 - Always or almost always

VC315294

- 12. How often do you feel you can do a good job on your science assignments?
 - Never or hardly ever
 - Sometimes
 - © Often
 - Always or almost always

L2SB1

13. Please indicate how much you DISAGREE or AGREE with the following statements about science. Fill in **one** oval on each line.

	Strongly disagree	Disagree	Agree	Strongly agree	
a. I do science-related activities that are not for schoolwork.	(A)	®	©	•	VC305348
b. I like science.	A	B	0	(D)	VC305350
c. Science is one of my favorite subjects.	A	B	0	•	VC305351
d. I take science only because I have to.	A	B	0	•	VC305352
e. I need to do well in science to get the job I want.	A	®	0	•	VH142495
f. I would like a job that involves using science.	A	$^{ ext{ B}}$	0	0	VH142499

VF633128

14. In this school year, have you participated in any of the following activities? Fill in **one** oval on each line.

	Yes	No	
a. Science fair	A	₿	VF633132
b. Science club	(A)	®	VF633134
c. Science competition	A	®	VF633135

VF633304 VF633276

- 15. In this school year, have you visited a museum, zoo, or aquarium to learn about science on a school trip?
 - A Yes
 - ® No

- 16. In this school year, have you visited a museum, zoo, or aquarium to learn about science that was **not** on a school trip?
 - A Yes
 - ® No

VB595182

- 17. How hard was this test compared to most other tests you have taken this year in school?
 - Easier than other tests
 - About as hard as other tests
 - Harder than other tests
 - Much harder than other tests

VC034559

- 18. How hard did you try on this test compared to how hard you tried on most other tests you have taken this year in school?
 - Not as hard as on other tests
 - About as hard as on other tests
 - Harder than on other tests
 - Much harder than on other tests

VB595184

- 19. How important was it to you to do well on this test?
 - Not very important
 - Somewhat important
 - © Important
 - O Very important

L2SB1



V. Enhanced NAEP Questions Tool

Introduction

After every assessment cycle, the National Center for Education Statistics (NCES) releases dozens of assessment questions to the public. The NAEP Questions Tool (NQT) allows users to search for questions by subject, grade, difficulty, and other characteristics. You can also view scoring guides, keys, national performance data, demographic group data, and student responses (for constructed-response questions only). The tool also allows users to create customized reports and to print selected questions and all relevant information. The purpose of the NQT is to provide teachers, researchers, educators, and the public with greater access to NAEP assessment questions.

How do I access the NAEP Questions Tool?

The NQT is available online at http://nces.ed.gov/nationsreportcard/nqt. The tool can also be accessed by clicking the "Sample Questions" link on The Nation's Report Card home page at http://nationsreportcard.gov.

What can I do with the enhanced NAEP Questions Tool?

NCES has developed an enhanced version of the NAEP Questions Tool (NQT) that expands on its current features to make the tool more useful than ever. You can now use the enhanced NQT to:

- Sort and select NAEP questions more easily with a new "drag 'n drop" viewing option
- "Test yourself" on any NAEP subject with a more customizable quiz function
- Create online, self-scoring quizzes that students can login to take any time
- Compare results to how students performed across the nation

If you need help navigating the NQT, there is a Help button on every page. For more information on how to use the NQT, visit http://nces.ed.gov/nationsreportcard/about/naeptools.asp#qrg.

Where can I find more information about the subjects NAEP assesses?

The NAEP website contains a wealth of information about the subjects NAEP assesses and can be accessed at http://nces.ed.gov/nationsreportcard.

How can I get additional help?

For more help with features on the NAEP website, click "Help" in the side panel.

For additional assistance, write to us via Contact Us at http://nces.ed.gov/nationsreportcard/contactus.aspx, or e-mail Sherran.Osborne@ed.gov.

48 About NAEP

VI. About NAEP

NAEP OVERVIEW. NAEP is the largest continuing and nationally representative assessment of what our nation's students know and can do in various academic subjects. NAEP is administered by the National Center for Education Statistics within the Institute of Education Sciences of the U.S. Department of Education. For more information about the NAEP program, visit the NAEP website at http://nces.ed.gov/nationsreportcard or call 202–502–7420.

PARTICIPATION. States and districts that receive Title I funds are required to participate in biennial NAEP reading and mathematics assessments at grades 4 and 8. Student participation is always voluntary. Contact your school's NAEP coordinator for more information.

NAEP CONTENT. The National Assessment Governing Board sets policy for NAEP and oversees the creation of the NAEP frameworks, which describe the specific knowledge and skills that should be assessed in each subject. For additional information on framework development, see the Governing Board's website at http://www.nagb.org/publications/frameworks.htm.

NAEP SECURE QUESTIONS. On written request, adults may review NAEP questions and instruments still in use. These arrangements must be made in advance, and persons reviewing the assessment may not remove the booklets from the room, copy them, or take notes. Contact your school's NAEP coordinator for more information.

NAEP PUBLICATIONS. NAEP reports and brochures can be searched and downloaded from the NAEP website at http://nces.ed.gov/nationsreportcard.

FOR FURTHER INFORMATION. For prompt field staff support on these or other matters, call the NAEP Help Desk at 800–283–6237.

