



Our Students. Their Moment.

**New York State Testing Program  
Grade 3  
Mathematics Test**

**Released Questions**

**June 2019**

New York State administered the Mathematics Tests in May 2019 and is now making approximately 75% of the questions from these tests available for review and use.



# New York State Testing Program Grades 3–8 Mathematics

## Released Questions from 2019 Exams

### ***Background***

In 2013, New York State began administering tests designed to assess student performance in accordance with the instructional shifts and rigor demanded by the new New York State P-12 Learning Standards in Mathematics. To help in this transition to new assessments, the New York State Education Department (SED) has been releasing an increasing number of test questions from the tests that were administered to students across the State in the spring. This year, SED is again releasing large portions of the 2019 NYS Grades 3-8 English Language Arts and Mathematics test materials for review, discussion, and use.

For 2019, included in these released materials are at least 75 percent of the test questions that appeared on the 2019 tests (including all constructed-response questions) that counted toward students' scores. Additionally, SED is also providing a map that details what each released question measures and the correct response to each question. These released materials will help students, families, educators, and the public better understand the tests and the New York State Education Department's expectations for students.

### ***Understanding Math Questions***

#### **Multiple-Choice Questions**

Multiple-choice questions are designed to assess the New York State P-12 Learning Standards for Mathematics. Mathematics multiple-choice questions will be used mainly to assess standard algorithms and conceptual standards. Multiple-choice questions incorporate both the grade-level standards and the "Standards for Mathematical Practices." Many questions are framed within the context of real-world applications or require students to complete multiple steps. Likewise, many of these questions are linked to more than one standard, drawing on the simultaneous application of multiple skills and concepts.

#### **Short-Response Questions**

Short-response questions require students to complete tasks and show their work. Like multiple-choice questions, short-response questions will often require multiple steps, the application of multiple mathematics skills, and real-world applications. Many of the short-response questions will cover conceptual and application of the standards.

#### **Extended-Response Questions**

Extended-response questions ask students to show their work in completing two or more tasks or a more extensive problem. Extended-response questions allow students to show their understanding of mathematical procedures, conceptual understanding, and application. Extended-response questions may also assess student reasoning and the ability to critique the arguments of others.

The scoring rubric for short and extended constructed-response questions can be found in the grade-level Educator Guides at <https://www.engageny.org/resource/test-guides-english-language-arts-and-mathematics>.

### **New York State P-12 Learning Standards Alignment**

The alignment(s) to the New York State P-12 Learning Standards for Mathematics is/are intended to identify the primary analytic skills necessary to successfully answer each question. However, some questions measure proficiencies described in multiple standards, including a balanced combination of procedure and conceptual understanding. For example, two-point and three-point constructed-response questions require students to show an understanding of mathematical procedures, concepts, and applications.

### ***These Released Questions Do Not Comprise a “Mini Test”***

To ensure future valid and reliable tests, some content must remain secure for possible use on future exams. As such, this document is *not* intended to be representative of the entire test, to show how operational tests look, or to provide information about how teachers should administer the test; rather, its purpose is to provide an overview of how the test reflects the demands of the New York State P-12 Learning Standards.

The released questions do not represent the full spectrum of the standards assessed on the State tests, nor do they represent the full spectrum of how the standards should be taught and assessed in the classroom. It should not be assumed that a particular standard will be measured by an identical question in future assessments. Specific criteria for writing test questions, as well as additional assessment information, are available at <http://www.engageny.org/common-core-assessments>.

Name: \_\_\_\_\_



# *New York State Testing Program*

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## **2019 Mathematics Test Session 1**

# **Grade 3**

**May 1–3, 2019**

**RELEASED QUESTIONS**

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**Session 1**

# Session 1



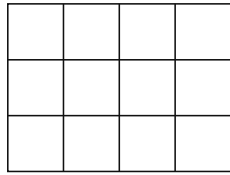
## TIPS FOR TAKING THE TEST

Here are some suggestions to help you do your best:

- Read each question carefully and think about the answer before making your choice.
- You have been provided with a ruler to use during the test. Use the ruler whenever you think it will help you to answer the question.

**1**

The array below represents a product.



Which expression can be used to find the product represented by the array?

- A  $4 + 3$
- B  $4 + 4 + 4 + 4$
- C  $3 \times 4$
- D  $3 \times 3 \times 3 \times 3$

**2**

Lucy is counting by 2s. She starts with the number 2 and stops at the number 50. Which number would Lucy **not** count?

- A 11
- B 22
- C 34
- D 48

**3**

Ms. Carter has 30 students in her classroom. She arranges them into 5 equal groups. Which expression represents how to find the number of students in each group?

- A  $30 + 5$
- B  $30 \div 5$
- C  $30 - 5$
- D  $30 \times 5$

**GO ON**

**6** Jess scored 18 points during her last basketball game. Each basket she made was worth 2 points. How many baskets did she make?

- A 20
- B 16
- C 9
- D 8

**7** A librarian receives two boxes of books for the library. The first box has 136 books. The second box has 58 fewer books than the first box. What is the total number of books the librarian receives?

- A 58
- B 78
- C 194
- D 214

**8** Which two fractions should be plotted at the same location on a number line?

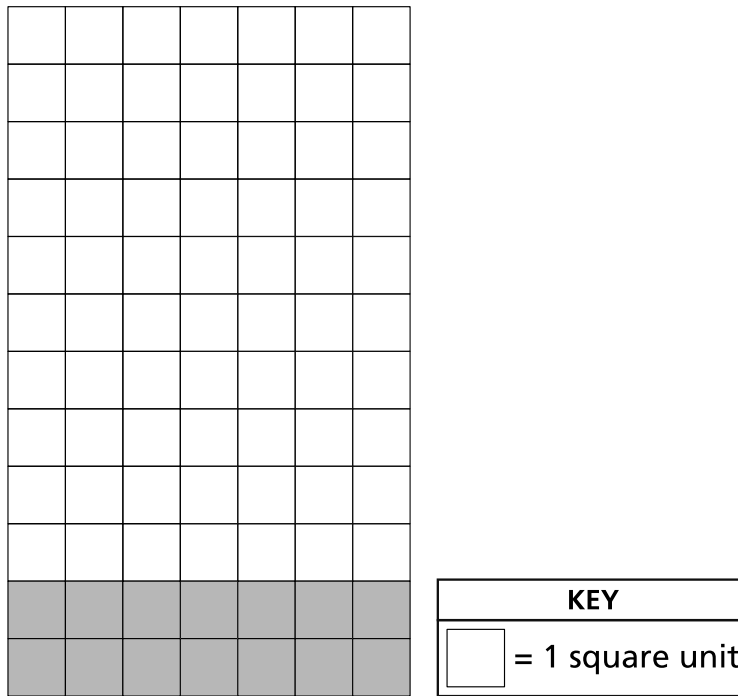
- A  $\frac{3}{4}$  and  $\frac{4}{8}$
- B  $\frac{1}{4}$  and  $\frac{2}{8}$
- C  $\frac{2}{4}$  and  $\frac{4}{6}$
- D  $\frac{1}{2}$  and  $\frac{2}{6}$

**GO ON**



**15**

The figure below represents a floor covered with white tiles and gray tiles.



Which expression could be used to find the area, in square units, of the entire floor?

- A**  $(12 + 7) \times (12 + 7)$                       **C**  $(10 + 7) \times (2 + 7)$
- B**  $(12 \times 7) + (12 \times 7)$                       **D**  $(10 \times 7) + (2 \times 7)$

**16**

Which expression is equivalent to  $(5 + 2) \times 8$ ?

- A**  $(8 \times 5) + (8 \times 2)$
- B**  $(5 \times 8) + (5 \times 2)$
- C**  $8 \times (5 \times 2)$
- D**  $(5 \times 8) \times 2$

21 Which equation is true when the missing number is the number 7?

A  $7 \times \underline{\quad ? \quad} = 42$

B  $7 \times \underline{\quad ? \quad} = 49$

C  $8 \times \underline{\quad ? \quad} = 40$

D  $8 \times \underline{\quad ? \quad} = 48$

22 A number is rounded to the nearest hundred. The result is 500. Which number could **not** be the number before it was rounded to the nearest hundred?

A 458

B 463

C 547

D 559

23 Which statement is true?

A The product of  $5 \times 2$  is even because both of the factors are even.

B The product of  $4 \times 4$  is odd because both of the factors are even.

C The product of  $2 \times 7$  is even because both of the factors are odd.

D The product of  $5 \times 3$  is odd because both of the factors are odd.

**GO ON**

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**Grade 3**  
**2019**  
**Mathematics Test**  
**Session 1**  
May 1–3, 2019

Name: \_\_\_\_\_



# *New York State Testing Program*

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## **2019 Mathematics Test Session 2**

# **Grade 3**

**May 1–3, 2019**

**RELEASED QUESTIONS**

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# Session 2



## TIPS FOR TAKING THE TEST

Here are some suggestions to help you do your best:

- Read each question carefully and think about the answer before making your choice or writing your response.
- You have been provided with a ruler to use during the test. Use the ruler whenever you think it will help you to answer the question.
- Be sure to show your work when asked.

26

The shape below is shaded to represent a fraction.



Which shape is shaded to represent a fraction equivalent to the shape shown above?

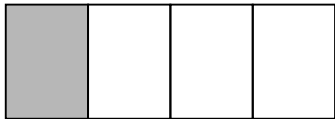
A



C



B



D



27

A store manager orders shirts from their warehouse. The shirts are packed into boxes and sent to the store, as described below.

- 81 shirts are ordered
- each shipping box holds 9 shirts

How many shipping boxes are needed for all of the shirts ordered?

A 8

B 9

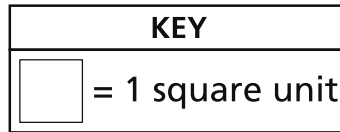
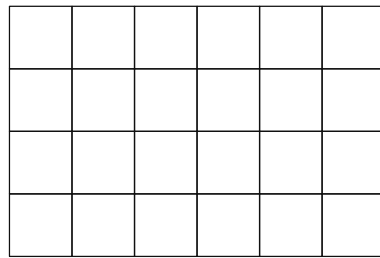
C 72

D 90

**GO ON**

28

Leeza used unit squares to find the area of the rectangle shown below.



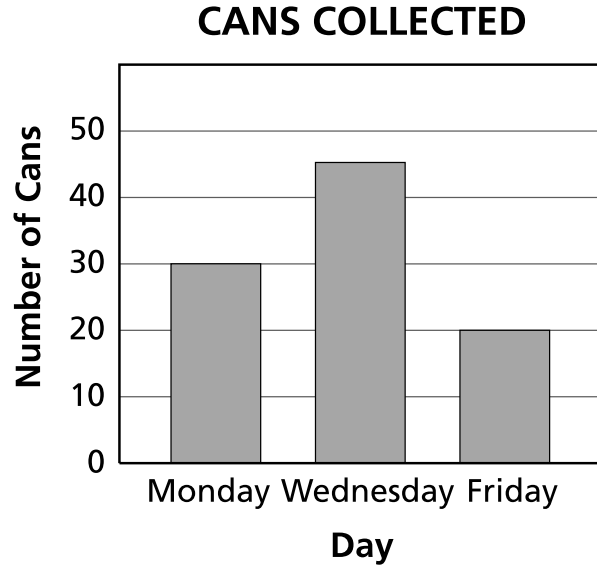
What is the area, in square units, of the rectangle?

- A 16
- B 20
- C 24
- D 28



29

The students in Mr. Gazer’s class are collecting cans for recycling. The bar graph below shows the number of cans they collected for each of three days.



How many more cans were collected on Wednesday than on Friday?

- A 15
- B 20
- C 25
- D 45

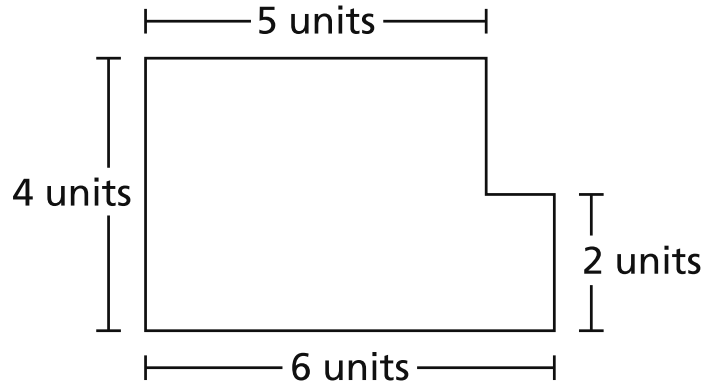
30

In which situation can the expression  $64 \div 8$  be used?

- A There are 8 buses with 64 students on each bus.
- B Ms. Vance has 8 pens and 64 pencils in a container.
- C There are 64 books in a bookcase and 8 books are removed.
- D Mr. Juarez has 64 cups and puts an equal number on each of 8 tables.

**GO ON**

- 31 The figure below was made by combining two rectangles.



What is the total area, in square units, of the figure?

- A 17  
B 20  
C 22  
D 32
- 32 Which expression is equivalent to  $4 \times 9$ ?

- A  $(4 \times 4) + (4 \times 5)$   
B  $(4 + 4) \times (4 + 5)$   
C  $(4 + 4) + (4 + 5)$   
D  $(4 \times 4) \times (4 \times 5)$

**33**

Coach Wu has a total of 30 soccer balls.

- 9 soccer balls are white
- the remaining soccer balls are one of three different colors (blue, pink, or green)
- there is an equal number of blue, pink, and green balls

How many green soccer balls does Coach Wu have?

- A** 7
- B** 10
- C** 21
- D** 39

**GO ON**

34

Wyatt wants to solve the equation below to find the missing factor.

$$8 \times \underline{\quad ? \quad} = 24$$

How can Wyatt find the missing factor by changing the equation to a division problem? Be sure to include the value of the missing factor in your answer.

*Explain your answer.*

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35

Two families buy large sandwiches of the same size. Family A shares one sandwich equally among 4 people, as represented in the picture below.



Family B shares one sandwich equally between 2 people.

Will a person from Family A get the same amount or a different amount of a sandwich as a person from Family B? Be sure to include what you know about fractions or parts of a whole in your answer.

*Explain your answer.*

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**GO ON**

36

Suzy made cupcakes for her friends. She started at 2:40 p.m. The list below shows the number of minutes it took to complete each step of the process.

- 9 minutes to mix the batter
- 18 minutes to bake the cupcakes
- 5 minutes to let them cool
- 10 minutes to frost the cupcakes

What time did Suzy finish frosting the cupcakes?

*Show your work.*

*Answer* \_\_\_\_\_ p.m.

**GO ON**

37

Ashlynn rides her bike 2 miles to school and 2 miles home each day. How many total miles will Ashlynn ride her bike to school and home in 40 days?

*Show your work.*

*Answer* \_\_\_\_\_ miles

**GO ON**

38

Two figures are shown below.

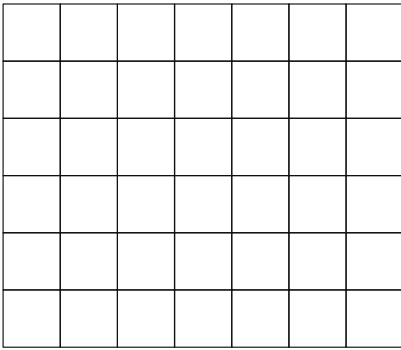



FIGURE A

KEY	
	= 1 square foot

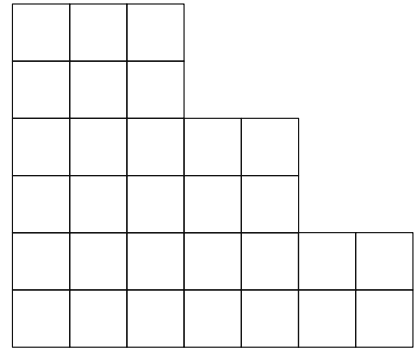


FIGURE B

What is the difference, in square feet, between the area of Figure A and the area of Figure B?

*Explain how you found your answer.*

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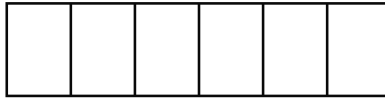
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39

Gianna cuts a ribbon into equal pieces as shown below.



She uses 4 pieces of the ribbon for a project. What fraction of the ribbon does Gianna use for the project?

*Explain how you found your answer.*

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**GO ON**

40

Ms. Ross is making breakfast for her family. She makes 15 small pancakes to share equally among 3 people. How many small pancakes will each person get?

*Show your work.*

*Answer* \_\_\_\_\_ pancakes

Ms. Ross also wants to give each person a glass of orange juice. If each person gets 8 ounces, how many total ounces of orange juice does she need?

*Show your work.*

*Answer* \_\_\_\_\_ ounces

**STOP**

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**Grade 3**  
**2019**  
**Mathematics Test**  
**Session 2**  
May 1–3, 2019

**THE STATE EDUCATION DEPARTMENT**  
**THE UNIVERSITY OF THE STATE OF NEW YORK / ALBANY, NY 12234**  
**2019 Mathematics Tests Map to the Standards**  
**Grade 3 Released Questions on EngageNY**

Question	Type	Key	Points	Standard	Cluster	Multiple Choice Questions:	Constructed Response Questions:	
						Percentage of Students Who Answered Correctly (P-Value)	Average Points Earned	P-Value (Average Points Earned ÷ Total Possible Points)
<b>Session 1</b>								
1	Multiple Choice	C	1	CCSS.Math.Content.3.OA.A.1	Operations and Algebraic Thinking	0.90		
2	Multiple Choice	A	1	CCSS.Math.Content.3.OA.D.9	Operations and Algebraic Thinking	0.81		
3	Multiple Choice	B	1	CCSS.Math.Content.3.OA.A.2	Operations and Algebraic Thinking	0.81		
6	Multiple Choice	C	1	CCSS.Math.Content.3.OA.A.3	Operations and Algebraic Thinking	0.70		
7	Multiple Choice	D	1	CCSS.Math.Content.3.OA.D.8	Operations and Algebraic Thinking	0.35		
8	Multiple Choice	B	1	CCSS.Math.Content.3.NF.A.3a	Number and Operations - Fractions	0.59		
15	Multiple Choice	D	1	CCSS.Math.Content.3.MD.C.7c	Measurement and Data	0.56		
16	Multiple Choice	A	1	CCSS.Math.Content.3.OA.B.5	Operations and Algebraic Thinking	0.48		
21	Multiple Choice	B	1	CCSS.Math.Content.3.OA.A.4	Operations and Algebraic Thinking	0.70		
22	Multiple Choice	D	1	CCSS.Math.Content.3.NBT.A.1	Number and Operations in Base Ten	0.45		
23	Multiple Choice	D	1	CCSS.Math.Content.3.OA.D.9	Operations and Algebraic Thinking	0.59		
<b>Session 2</b>								
26	Multiple Choice	C	1	CCSS.Math.Content.3.NF.A.3b	Number and Operations - Fractions	0.84		
27	Multiple Choice	B	1	CCSS.Math.Content.3.OA.A.3	Operations and Algebraic Thinking	0.77		
28	Multiple Choice	C	1	CCSS.Math.Content.3.MD.C.5b	Measurement and Data	0.93		
29	Multiple Choice	C	1	CCSS.Math.Content.3.MD.B.3	Measurement and Data	0.67		
30	Multiple Choice	D	1	CCSS.Math.Content.3.OA.A.2	Operations and Algebraic Thinking	0.69		
31	Multiple Choice	C	1	CCSS.Math.Content.3.MD.C.7d	Measurement and Data	0.34		

32	Multiple Choice	A	1	CCSS.Math.Content.3.OA.B.5	Operations and Algebraic Thinking	0.70		
33	Multiple Choice	A	1	CCSS.Math.Content.3.OA.D.8	Operations and Algebraic Thinking	0.48		
34	Constructed Response		2	CCSS.Math.Content.3.OA.B.6	Operations and Algebraic Thinking		1.20	0.60
35	Constructed Response		2	CCSS.Math.Content.3.NF.A.3d	Number and Operations - Fractions		0.78	0.39
36	Constructed Response		2	CCSS.Math.Content.3.MD.A.1	Measurement and Data		1.06	0.53
37	Constructed Response		2	CCSS.Math.Content.3.NBT.A.3	Number and Operations in Base Ten		0.97	0.49
38	Constructed Response		2	CCSS.Math.Content.3.MD.C.6	Measurement and Data		0.83	0.41
39	Constructed Response		2	CCSS.Math.Content.3.NF.A.1	Number and Operations - Fractions		1.19	0.59
40	Constructed Response		3	CCSS.Math.Content.3.OA.A.3	Operations and Algebraic Thinking		2.03	0.68

\*This item map is intended to identify the primary analytic skills necessary to successfully answer each question. However, some questions measure proficiencies described in multiple standards, including a balanced combination of procedural and conceptual understanding.