engage^ny

Our Students. Their Moment.

New York State Testing Program
Grade 3
Mathematics Test

Released Questions

June 2018

New York State administered the Mathematics Tests in May 2018 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 2018 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 2018 NYS Grades 3-8 English Language Arts and Mathematics test materials for review, discussion, and use.

For 2018, included in these released materials are at least 75 percent of the test questions that appeared on the 2018 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

2018 Mathematics Test Session 1

Grade 3

May 1–3, 2018

Released Questions

Developed and published under contract with the New York State Education Department by Questar Assessment Inc., 5550 Upper 147th Street West, Minneapolis, MN 55124.

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 Which expression is another way to show 8×6 ?

A $(2 + 4) + 6$

B $(2 + 4) \times 6$

C $(2 \times 4) + 6$

D $(2 \times 4) \times 6$

2 The distance from Chicago to New York City is 794 miles. What is 794 rounded to the nearest hundred?

A 700

B 794

C 800

D 894

3 What number makes the equation true?

$4 = \underline{\quad ? \quad} \div 7$

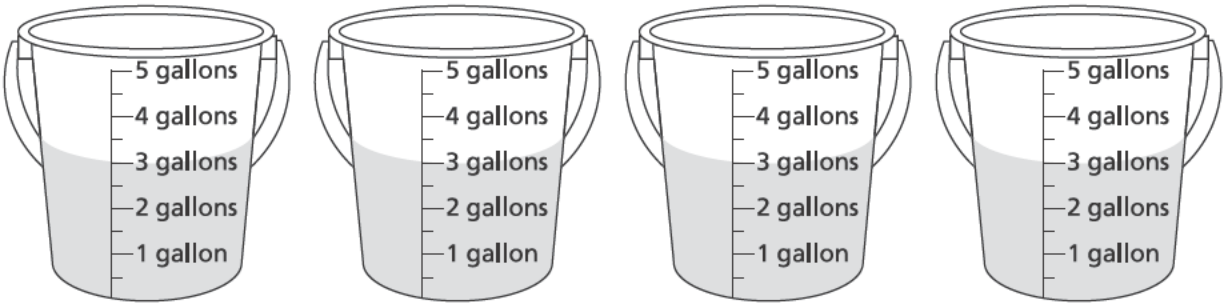
A 11

B 21

C 28

D 32

6 A third-grade class is having a car wash. They put the same amount of water in each bucket, as shown.



Which expression can be used to find the total amount of water, in gallons, in all the buckets?

A 4×3

B 5×3

C 4×4

D 5×4

7 A bulletin board can be covered completely by 30 square pieces of paper without any gaps or overlaps. If each piece of paper has side lengths of 1 foot, what is the total area of the bulletin board?

A 1 foot

B 30 feet

C 1 square foot

D 30 square feet

17 Joe and Mike both ran the same race. Joe finished the race 4 minutes before Mike. If Mike finished the race at 4:02 p.m., what time did Joe finish the race?

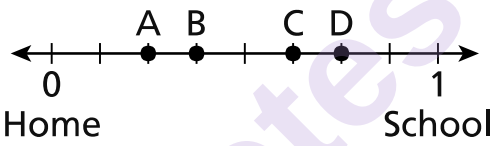
A 3:58 p.m.

B 4:06 p.m.

C 8:02 p.m.

D 12:02 p.m.

18 The distance between Liam's home and his school is exactly 1 mile, as shown on the number line below.



Liam buys a snack at a store that is $\frac{3}{8}$ mile from his home. What point on the number line shows the location of the store?

A point A

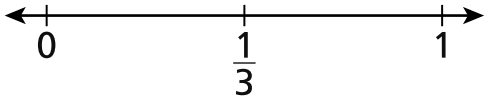
B point B

C point C

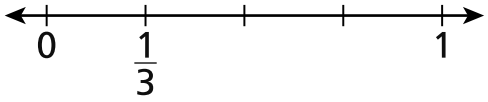
D point D

22 Which number line shows the fraction $\frac{1}{3}$ plotted correctly?

A

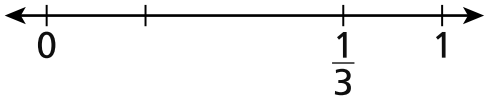


C



B

D



23 A store has 8 fish tanks that each have 40 liters of water. What is the total number of liters of water in all of the fish tanks?

A 5

B 48

C 280

D 320

24 Last week, Paul ate 2 cookies each day for 5 days. This week, he ate 2 cookies each day for 4 days. Which expression can be used to represent the total number of cookies Paul ate in these two weeks?

A $2 \times (5 \times 4)$

B $2 \times (5 + 4)$

C $(2 \times 5) \times (2 \times 4)$

D $(2 + 5) \times (2 + 4)$

25 Kay and Juanita each have a garden of the same size and shape.

- Kay grows flowers in $\frac{1}{6}$ of her garden.
- Juanita grows flowers in $\frac{1}{3}$ of her garden.

Which statement shows a correct comparison of the sections of flowers grown in Kay's garden and Juanita's garden?

A $\frac{1}{6} > \frac{1}{3}$

B $\frac{1}{6} < \frac{1}{3}$

C $\frac{1}{3} = \frac{1}{6}$

D $\frac{1}{3} + \frac{1}{6}$

STOP

Grade 3
2018
Mathematics Test
Session 1
May 1–3, 2018

Name: _____

New York State Testing Program

2018 Mathematics Test Session 2

Grade 3

May 1–3, 2018

Released Questions

The possession or use of any communications device is strictly prohibited when taking this examination. If you have or use any communications device, no matter how briefly, your examination will be invalidated and no score will be calculated for you.

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 What number makes both equations true?

$6 \times \_\_?\_\_ = 48$

$48 \div 6 = \_\_?\_\_$

A 7

B 8

C 42

D 54

27 A teacher puts 5 packages of craft paper into a cabinet. Each package has 80 sheets of paper. What is the total number of sheets of craft paper that the teacher puts into the cabinet?

A 40

B 85

C 400

D 450

28 Jaime has a small container that holds exactly $\frac{1}{4}$ cup of dog food. How many times should Jaime fill the container and pour it into the dog's bowl to make sure the dog gets exactly $\frac{1}{2}$ cup of food?

A $\frac{1}{4}$

B $\frac{1}{2}$

C 2

D 4

29 Which situation can be solved using the expression $21 \div 3$?

A finding the number of shirts when there are 3 groups of 21 shirts

B finding the number of dresses when 21 more dresses are placed on a rack with 3 dresses

C finding the number of jackets left over when 3 out of 21 jackets are sold

D finding the number of skirts on each rack when a total of 21 skirts are placed equally on 3 racks

30 A number pattern is shown below.

5, 9, 13, 17, 21, 25, 29

Which rule could have been used to make the pattern?

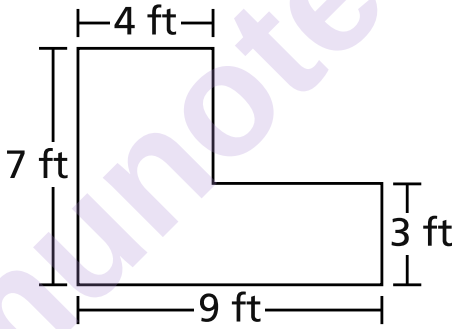
A Start with 0. Add 4 each time to get the next number.

B Start with 0. Add 5 each time to get the next number.

C Start with 5. Add 4 each time to get the next number.

D Start with 5. Add 5 each time to get the next number.

31 The shape of Cindy's flower garden is shown below.



What is the area, in square feet, of Cindy's flower garden?

A 23

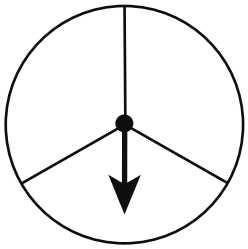
B 32

C 43

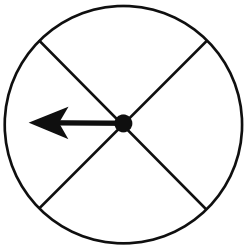
D 47

32 The Diaz family used a spinner to play a game. The spinner was in the shape of a circle. Each section of the spinner was $\frac{1}{4}$ of the whole circle. Which picture shows a spinner that the Diaz family used?

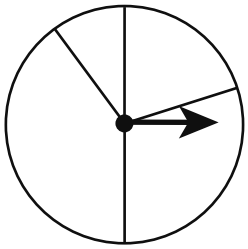
A



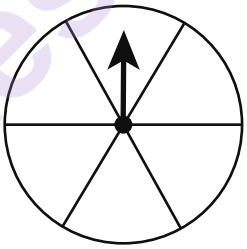
C



B



D



33 Which fraction is equivalent to 4?

A $\frac{1}{4}$

B $\frac{8}{4}$

C $\frac{4}{4}$

D $\frac{4}{1}$

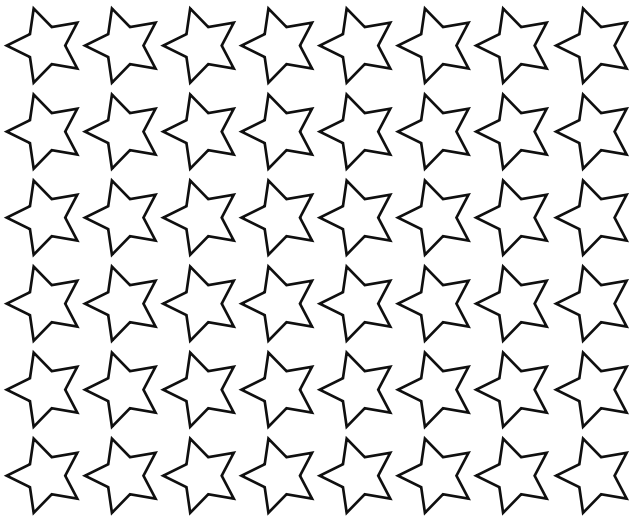
34 Beth met her friends at the library at 4:30 p.m. It took her 24 minutes to walk from her house to the library. What time did Beth leave her house to arrive at the library at exactly 4:30 p.m. ?

Show your work.

Answer _____ p.m.

GO ON

35 Ethan made the array below to show the product of 6×7.



Does Ethan's model show the product of 6×7? Explain why or why not.

Answer

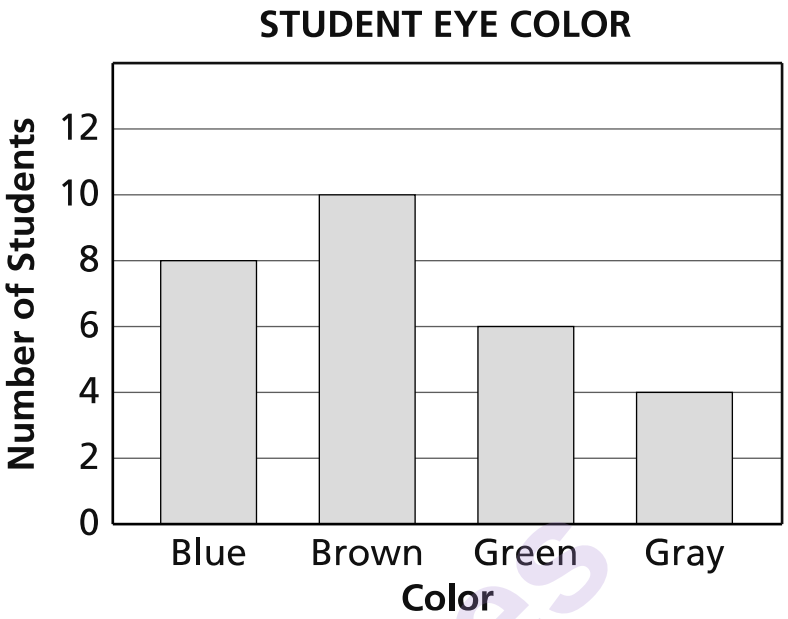
36 Two teachers each buy pizzas for a party. All of the pizzas are the same size.

- Teacher A's pizzas were cut into 6 equal slices.
- Teacher B's pizzas were cut into 8 equal slices.

Which teacher's pizzas were cut into larger slices? Use what you know about fractions to explain your answer.

Answer

37 The bar graph below shows the information third grade students collected about the eye color of students in their classroom.



How many **fewer** students have green eyes than students that have blue eyes and brown eyes combined?

Show your work.

Answer _____ fewer students

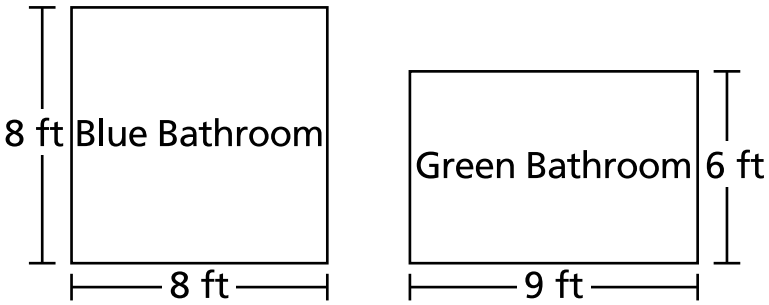
38 A tennis coach buys 8 cans of tennis balls. There are 3 tennis balls in each can. All of the tennis balls will be shared equally among 6 players. How many tennis balls will each player get?

Show your work.

Answer _____ tennis balls

GO ON

39 The sizes of two bathroom floors in Beth's house are shown below.



Beth says that the area of the floor of the green bathroom is larger than the area of the floor of the blue bathroom. Is Beth's statement true? Why or why not?

Explain your answer.

40 Edwin uses 4 rolls of green ribbon and 8 rolls of purple ribbon for a project.

- Each roll of green ribbon has a length of 90 feet.
- Each roll of purple ribbon has a length of 60 feet.

What is the difference in length, in feet, between the total amount of green ribbon and the total amount of purple ribbon Edwin uses?

Show your work.

Answer _____ feet

STOP

Grade 3
2018
Mathematics Test
Session 2
May 1–3, 2018

THE STATE EDUCATION DEPARTMENT

THE UNIVERSITY OF THE STATE OF NEW YORK / ALBANY, NY 12234

2018 Mathematics Tests Map to the Standards

Grade 3 Released Questions on EngageNY

Question	Type	Key	Points	Standard	Cluster	Multiple Choice Questions: Percentage of Students Who Answered Correctly (P-Value)	Constructed Response Questions: Average Points Earned	Constructed Response Questions: P-Value (Average Points Earned ÷ Total Possible Points)
Session 1								
1	Multiple Choice	D	1	CCSS.Math.Content.3.OA.B.5	Operations and Algebraic Thinking	0.78		
2	Multiple Choice	C	1	CCSS.Math.Content.3.NBT.A.1	Numbers and Operations in Base Ten	0.85		
3	Multiple Choice	C	1	CCSS.Math.Content.3.OA.A.4	Operations and Algebraic Thinking	0.75		
6	Multiple Choice	A	1	CCSS.Math.Content.3.OA.A.1	Operations and Algebraic Thinking	0.88		
7	Multiple Choice	D	1	CCSS.Math.Content.3.MD.C.5b	Measurement and Data	0.61		
17	Multiple Choice	A	1	CCSS.Math.Content.3.MD.A.1	Measurement and Data	0.66		
18	Multiple Choice	B	1	CCSS.Math.Content.3.NF.A.2b	Number and Operations— Fractions	0.70		
22	Multiple Choice	B	1	CCSS.Math.Content.3.NF.A.2a	Number and Operations— Fractions	0.62		
23	Multiple Choice	D	1	CCSS.Math.Content.3.MD.A.2	Measurement and Data	0.43		
24	Multiple Choice	B	1	CCSS.Math.Content.3.OA.B.5	Operations and Algebraic Thinking	0.31		
25	Multiple Choice	B	1	CCSS.Math.Content.3.NF.A.3d	Number and Operations— Fractions	0.66		
Session 2								
26	Multiple Choice	B	1	CCSS.Math.Content.3.OA.A.4	Operations and Algebraic Thinking	0.87		
27	Multiple Choice	C	1	CCSS.Math.Content.3.NBT.A.3	Numbers and Operations in Base Ten	0.71		
28	Multiple Choice	C	1	CCSS.Math.Content.3.NF.A.3a	Number and Operations— Fractions	0.51		
29	Multiple Choice	D	1	CCSS.Math.Content.3.OA.A.2	Operations and Algebraic Thinking	0.60		

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)
Session 2 continued								
30	Multiple Choice	C	1	CCSS.Math.Content.3.OA.D.9	Operations and Algebraic Thinking	0.77		
31	Multiple Choice	C	1	CCSS.Math.Content.3.MD.C.7d	Measurement and Data	0.36		
32	Multiple Choice	C	1	CCSS.Math.Content.3.G.A.2	Geometry	0.94		
33	Multiple Choice	D	1	CCSS.Math.Content.3.NF.A.3c	Number and Operations— Fractions	0.32		
34	Constructed Response		2	CCSS.Math.Content.3.MD.A.1	Measurement and Data		1.14	0.57
35	Constructed Response		2	CCSS.Math.Content.3.OA.A.1	Operations and Algebraic Thinking		1.62	0.81
36	Constructed Response		2	CCSS.Math.Content.3.NF.A.1	Number and Operations— Fractions		1.00	0.50
37	Constructed Response		2	CCSS.Math.Content.3.MD.B.3	Measurement and Data		1.12	0.56
38	Constructed Response		2	CCSS.Math.Content.3.OA.A.3	Operations and Algebraic Thinking		1.26	0.63
39	Constructed Response		2	CCSS.Math.Content.3.MD.C.7b	Measurement and Data		1.10	0.55
40	Constructed Response		3	CCSS.Math.Content.3.OA.D.8	Operations and Algebraic Thinking		1.17	0.39

*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.