



Our Students. Their Moment.

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

Released Questions

June 2017

New York State administered the Mathematics Common Core Tests in May 2017 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 2017 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 2017 NYS Grades 3-8 Common Core English Language Arts and Mathematics test materials for review, discussion, and use.

For 2017, included in these released materials are at least 75 percent of the test questions that appeared on the 2017 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

2017 Common Core Mathematics Test Book 1

Grade 3

May 2–4, 2017

Released Questions

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Book 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 choosing 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.

- 1 Theo divided a garden equally into 6 parts. He planted seeds in 5 of the parts. In what fraction of the garden did Theo plant seeds?

A $\frac{1}{6}$

B $\frac{1}{5}$

C $\frac{5}{6}$

D $\frac{6}{5}$

- 2 What number makes the equation below true?

$$35 \div ? = 7$$

A 5

B 6

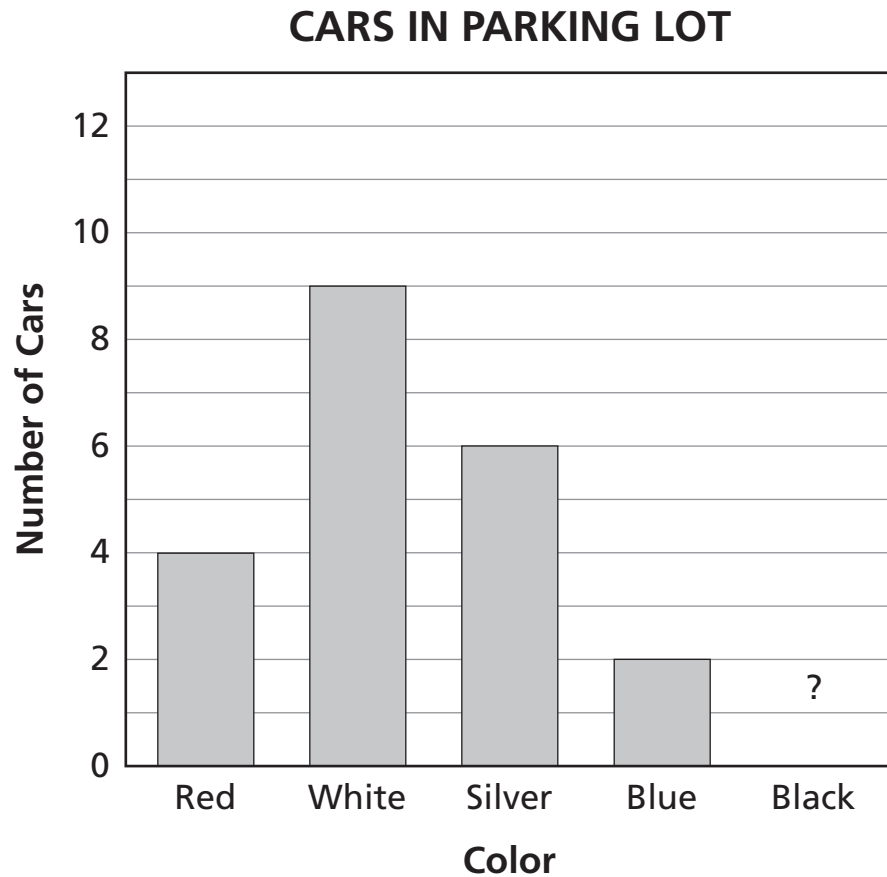
C 7

D 8

GO ON

5

The bar graph shows the numbers and colors of cars in a parking lot.



The total number of silver and black cars equals the total number of red, white, and blue cars. How many black cars are in the parking lot?

- A 9
- B 10
- C 15
- D 30

GO ON

- 6 Colton and his dad bought a gallon of paint that cost \$13. They also bought 2 brushes that cost \$9 each. What was the total cost, not including tax, of the brushes and the paint they bought?

- A \$22
- B \$24
- C \$31
- D \$35

- 7 The table below shows four numbers rounded to the nearest hundreds place. One of the numbers is rounded incorrectly.

Starting Number	Rounded to the Nearest Hundred
1,212	1,200
2,396	2,300
3,636	3,600
5,573	5,600

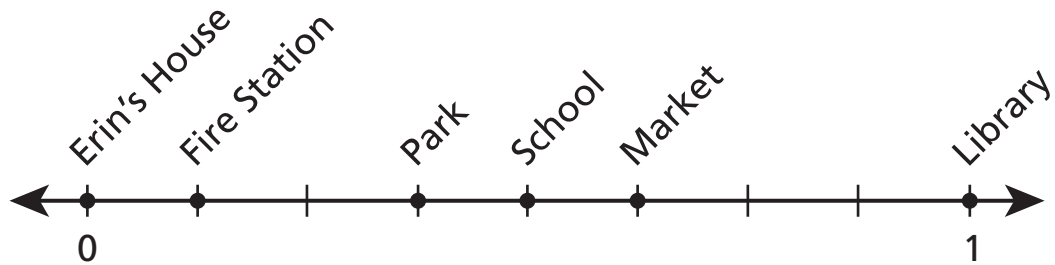
Which number is rounded to the nearest hundreds place incorrectly?

- A 1,212
- B 2,396
- C 3,636
- D 5,573

8 Tayshawn sorts 56 marbles into equal groups with no marbles left over. Which statement could be true of the groups of marbles Tayshawn sorts?

- A There are 6 groups of marbles with 8 marbles in each group.
- B There are 7 groups of marbles with 7 marbles in each group.
- C There are 8 groups of marbles with 7 marbles in each group.
- D There are 9 groups of marbles with 6 marbles in each group.

9 Erin walked 1 mile from her house to the library. Along the way, she passed several places shown on the number line below.

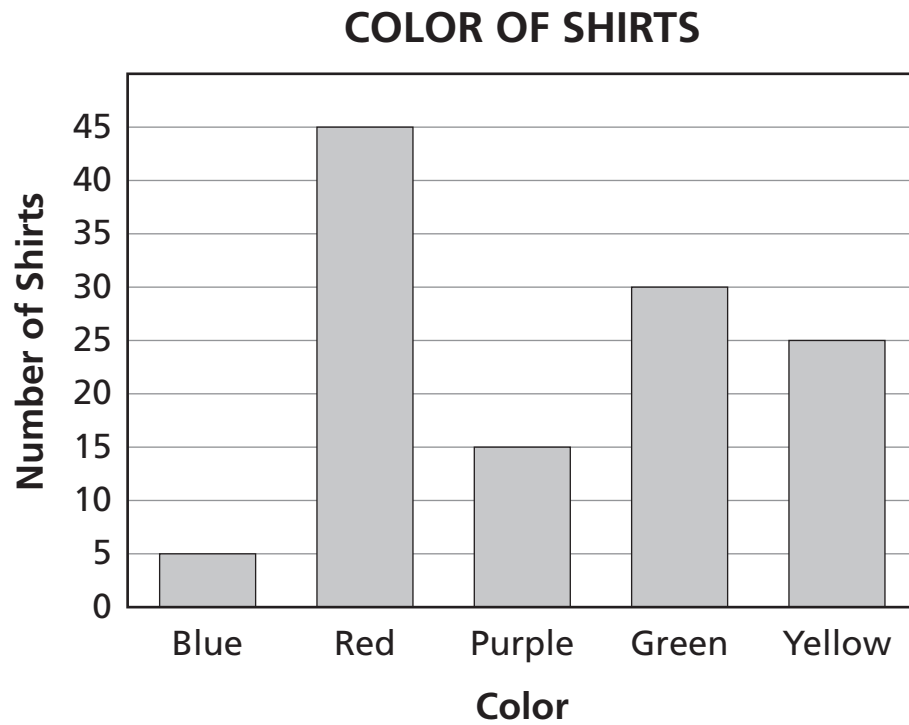


Which place is $\frac{4}{8}$ mile from Erin's house?

- A the fire station
- B the park
- C the school
- D the market

13

The graph below shows the number of shirts of each color in a store.

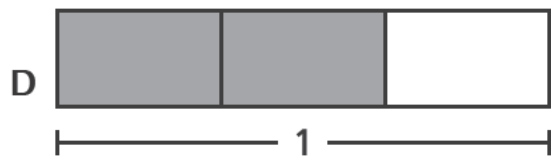
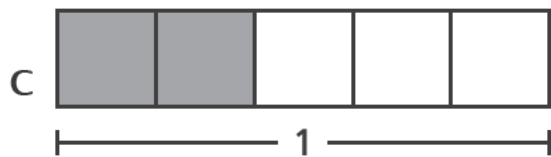
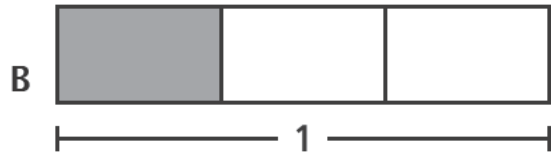
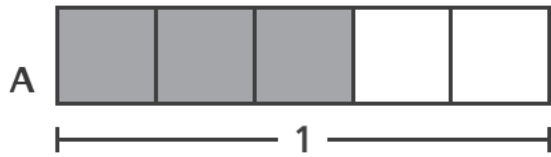


How many more red shirts than the total number of blue shirts and yellow shirts are in the store?

- A 15
- B 30
- C 40
- D 45

GO ON

- 16 Which of these is shaded to represent $\frac{2}{3}$?

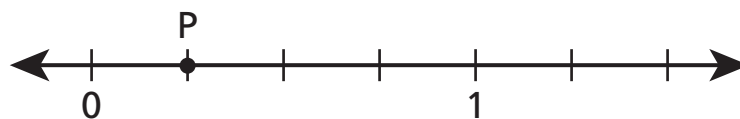


- 17 Carmen saved 592 pennies. Her sister saved 128 pennies. Together, they put 250 pennies in wrappers and took them to the bank. What is the total number of pennies, rounded to the nearest hundred, Carmen and her sister have left?

- A 300
- B 500
- C 700
- D 1,000

GO ON

- 20 Which fraction does point P represent on the number line below?



- A $\frac{1}{6}$
- B $\frac{2}{6}$
- C $\frac{1}{4}$
- D $\frac{2}{4}$
- 21 Anya placed 16 cups in rows on a table. There are 8 cups in each row. Which equation could be used to represent this situation?

A $16 \times 8 = \square$

B $8 + 16 = \square$

C $\square \div 8 = 16$

D $\square \times 8 = 16$

GO ON

22 Which fraction is equal to $\frac{2}{8}$?

A $\frac{8}{2}$

B $\frac{1}{2}$

C $\frac{2}{4}$

D $\frac{1}{4}$

STOP

Grade 3
2017 Common Core
Mathematics Test
Book 1
May 2–4, 2017

Name: _____



New York State Testing Program

2017 Common Core Mathematics Test Book 2

Grade 3

May 2–4, 2017

Released Questions

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Book 2

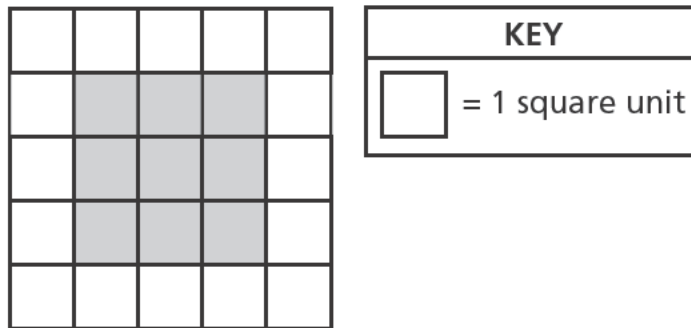


TIPS FOR TAKING THE TEST

Here are some suggestions to help you do your best:

- Read each question carefully and think about the answer before choosing 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.

- 23 Brandon used square tiles to find the area of the shaded part of the picture below.



What is the area of the shaded part of the picture?

- A 3 square units
B 6 square units
C 8 square units
D 9 square units
- 24 Which pair of equations is true when the number 8 is placed in the blanks?

A $4 \times \underline{\quad} = 32$
 $32 \div \underline{\quad} = 4$

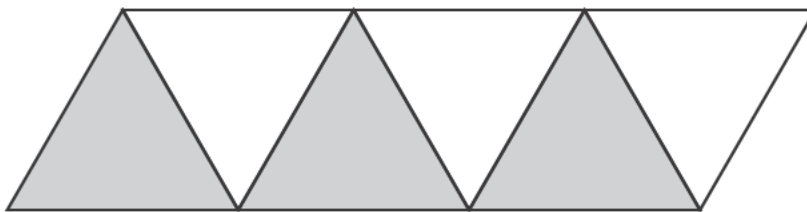
B $5 \times \underline{\quad} = 40$
 $\underline{\quad} \div 40 = 5$

C $6 \times 48 = \underline{\quad}$
 $48 \div \underline{\quad} = 6$

D $7 \times \underline{\quad} = 63$
 $63 \div \underline{\quad} = 7$

GO ON

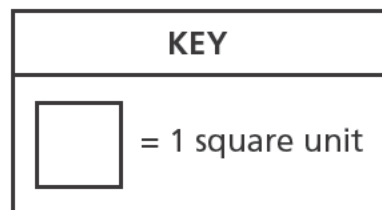
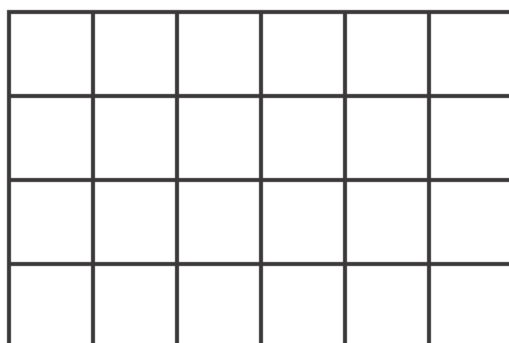
- 25 The figure below is divided into equal-sized parts.



Which fraction is represented by the shaded parts of the figure?

- A $\frac{1}{3}$
- B $\frac{3}{3}$
- C $\frac{3}{6}$
- D $\frac{6}{3}$
- 26 There are 12 students in Ms. Miller's class. She needs 24 juice boxes for a class party. The juice boxes come in packages of 6 juice boxes each. Which expression represents the number of packages of juice boxes Ms. Miller needs to buy for the class party?
- A $24 + 12$
- B $36 \div 6$
- C 12×6
- D $24 \div 6$

- 27 The figure below is tiled with squares.



Which expression could be used to find the area of this figure?

- A 4×6
- B $4 + 6$
- C $4 \times 4 \times 6 \times 6$
- D $4 + 4 + 6 + 6$

29 Which expression is equivalent to 5×9 ?

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

B $(5 \times 5) + (5 \times 4)$

C $(5 \times 5) + (5 \times 9)$

D $(5 \times 9) \times (5 \times 9)$

30 A coach rounded the number of runners at a track meet to the nearest 10. The rounded number of runners is 400. Which number could be the actual number of runners at the track meet?

A 382

B 397

C 406

D 447

31 Last weekend Sanjay watched 3 television shows that were each 30 minutes long. He also watched 1 movie on television that was 90 minutes long. What is the total number of minutes Sanjay watched television last weekend?

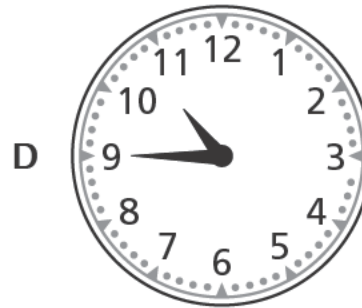
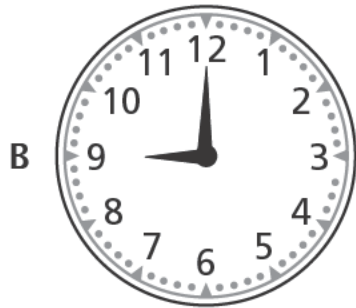
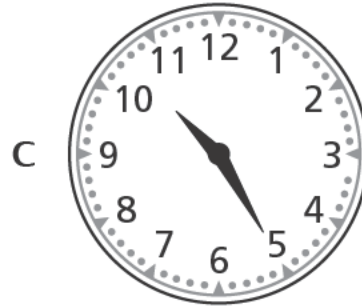
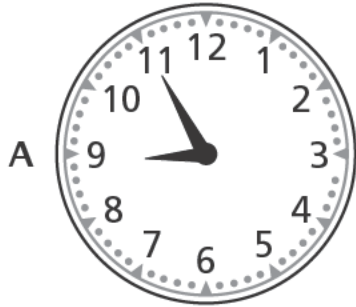
- A 100
- B 120
- C 150
- D 180

32 A total of 30 players will play basketball at a park. There will be exactly 5 players on each team. Which statement correctly explains how to find the number of teams needed?

- A Add 5 to 30 to find 35 teams.
- B Divide 30 by 5 to find 6 teams.
- C Multiply 30 and 5 to find 150 teams.
- D Subtract 5 from 30 to find 25 teams.

GO ON

- 35 Frankie's music class begins at 9:40 a.m. The class is 45 minutes long. Which clock shows the time that Frankie's class ends?



- 36 What number multiplied by 4 equals 36?

- A 6
- B 7
- C 8
- D 9

- 37 The fraction strip shown below is shaded to represent a fraction.



Which fraction strip is shaded to represent a fraction equal to the fraction strip shown above?



- 38 Which fraction comparison is **not** correct?

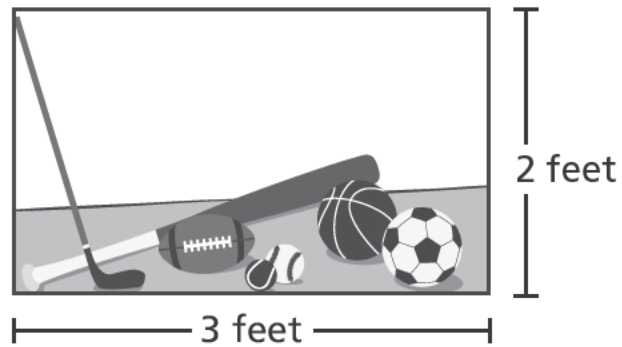
A $\frac{1}{3} < \frac{2}{3}$

B $\frac{3}{4} < \frac{1}{4}$

C $\frac{2}{3} > \frac{2}{8}$

D $\frac{5}{6} > \frac{5}{8}$

- 39 Kelly has a rectangular poster in her room. The poster is shown below.



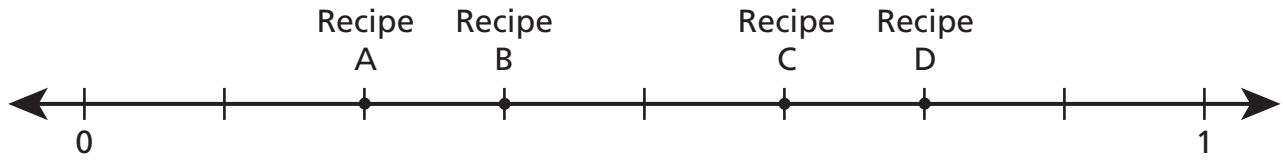
What is the area, in square feet, of Kelly's poster?

- A 5
 - B 6
 - C 10
 - D 12
- 40 Ms. Perez drove a total of 40 miles in 5 days. She drove the same number of miles each day. How many miles did Ms. Perez drive each day?
- A 5
 - B 7
 - C 8
 - D 9

GO ON

41

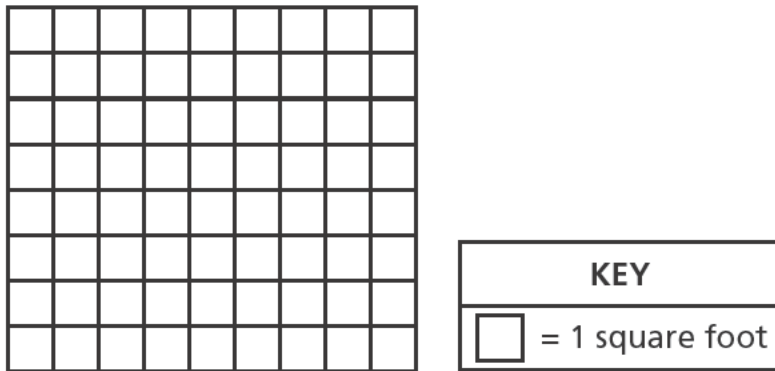
Four different recipes were used by students to bake cookies for a bake sale. The number line below shows the fraction of a cup of milk needed in each recipe.



Which recipe needs $\frac{3}{8}$ cup of milk?

- A Recipe A
- B Recipe B
- C Recipe C
- D Recipe D

- 43 The diagram below represents a wall Kim painted in her basement.



What is the area, in square feet, of the wall Kim painted?

- A 17
B 34
C 64
D 72
- 44 Conor made 9 shapes with straws. Each shape had 5 straws. Conor used 15 more straws to make more shapes. What is the total number of straws Conor used to make all the shapes?
- A 20
B 29
C 45
D 60

STOP

Grade 3
2017 Common Core
Mathematics Test
Book 2
May 2–4, 2017

Name: _____



New York State Testing Program

2017 Common Core Mathematics Test Book 3

Grade 3

May 2–4, 2017

Released Questions

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Book 3



TIPS FOR TAKING THE TEST

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- Read each question carefully and think about the answer before 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.

45 Write a fraction that is less than $\frac{1}{3}$ using 1 as the numerator.

Answer _____

Explain why the answer you chose is less than $\frac{1}{3}$.

Answer

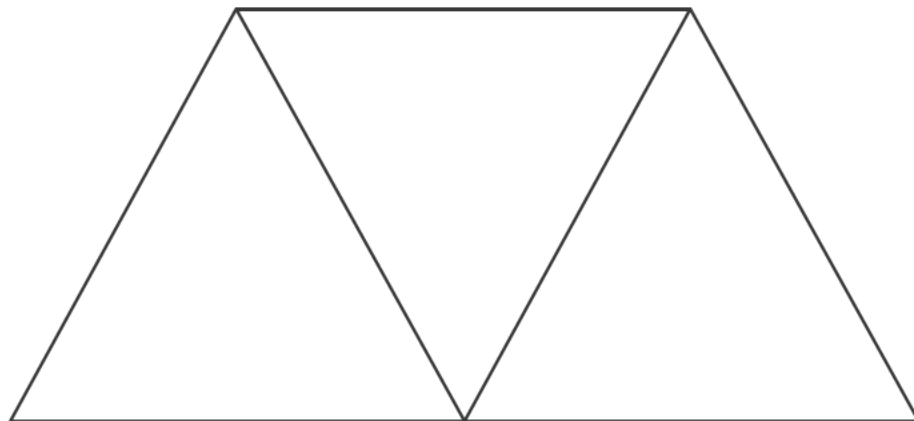
- 46 Patti puts 40 marbles in a bag. Each marble has a mass of 3 grams. What is the total mass of the bag of marbles?

Show your work.

Answer _____ grams

GO ON

- 47 Ved drew the shape below by combining exactly three triangles of the same size and shape.



What fraction of the area of the whole shape is each triangle?

Answer _____

Explain how you know your answer is correct.

48

Leslie says that 5 multiplied by an even number always results in an even product. Is Leslie's statement correct?

Explain your answer.

49

Mrs. Ruiz bought 5 bags of balloons for a party. Each bag contained 70 balloons. Andy said Mrs. Ruiz bought a total of 75 balloons. Andy is incorrect.

What error did Andy make when calculating the total number of balloons?

What is the total number of balloons Mrs. Ruiz bought?

Show your work.

Answer _____ balloons

GO ON

50

A band has 36 members. They are arranged into 6 equal rows. How many band members are in each row?

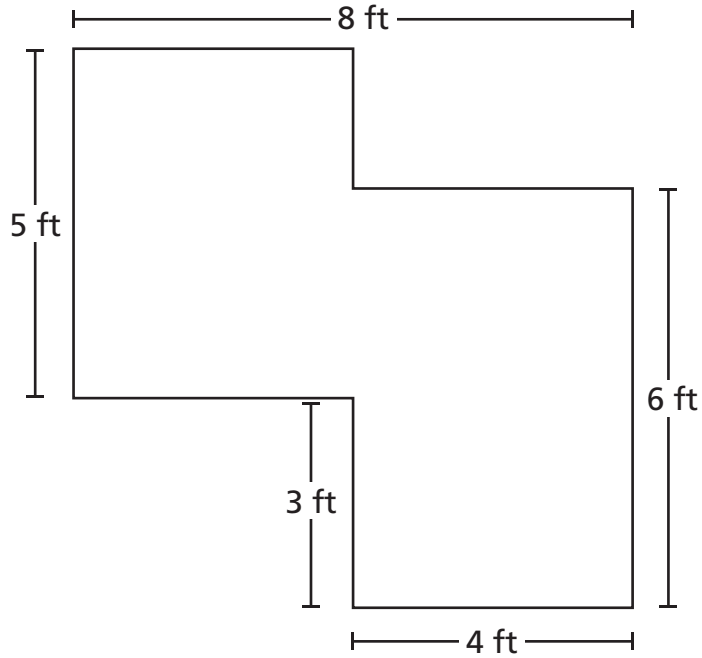
Show your work.

Can the same 36 band members be placed into exactly 7 equal rows? Why or why not?

Explain your answer.

51

A gardener is drawing plans for a new yard. She creates the picture below to represent the size and shape of a new lawn.



How can the gardener find the total area of the new lawn? Describe the process she can use.

What is the total area of the new lawn?

Answer _____ square feet

GO ON

Ms. Amani and Mr. Blake each ordered supplies for their classrooms. The cost of the supplies is shown below.

CLASSROOM SUPPLIES

Supply	Cost
Pencil Case	\$3
Box of Crayons	\$4
Pack of Folders	\$2

Ms. Amani ordered 7 pencil cases and 9 packs of folders. Mr. Blake ordered 9 boxes of crayons. What is the difference in the cost of the supplies Ms. Amani ordered and the cost of the supplies Mr. Blake ordered?

Show your work.

Difference in cost \$ _____

STOP

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Grade 3
2017 Common Core
Mathematics Test
Book 3
May 2–4, 2017

THE STATE EDUCATION DEPARTMENT
 THE UNIVERSITY OF THE STATE OF NEW YORK / ALBANY, NY 12234
 2017 Mathematics Tests Map to the Standards
 Released Questions on EngageNY

Grade 3 Question	Type	Key	Points	Standard	Cluster	Secondary Standard(s)	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)
Book 1									
1	Multiple Choice	C	1	CCSS.Math.Content.3.NF.A.1	Number and Operations—Fractions		0.76		
2	Multiple Choice	A	1	CCSS.Math.Content.3.OA.A.4	Operations and Algebraic Thinking		0.90		
5	Multiple Choice	A	1	CCSS.Math.Content.3.MD.B.3	Measurement and Data		0.51		
6	Multiple Choice	C	1	CCSS.Math.Content.3.OA.D.8	Operations and Algebraic Thinking		0.56		
7	Multiple Choice	B	1	CCSS.Math.Content.3.NBT.A.1	Number and Operations in Base Ten		0.62		
8	Multiple Choice	C	1	CCSS.Math.Content.3.OA.A.2	Operations and Algebraic Thinking		0.67		
9	Multiple Choice	C	1	CCSS.Math.Content.3.NF.A.2b	Number and Operations—Fractions		0.74		
13	Multiple Choice	A	1	CCSS.Math.Content.3.MD.B.3	Measurement and Data		0.66		
16	Multiple Choice	D	1	CCSS.Math.Content.3.NF.A.1	Number and Operations—Fractions		0.88		
17	Multiple Choice	B	1	CCSS.Math.Content.3.OA.D.8	Operations and Algebraic Thinking		0.44		
20	Multiple Choice	C	1	CCSS.Math.Content.3.NF.A.2a	Number and Operations—Fractions		0.38		
21	Multiple Choice	D	1	CCSS.Math.Content.3.OA.B.6	Operations and Algebraic Thinking		0.44		
22	Multiple Choice	D	1	CCSS.Math.Content.3.NF.A.3a	Number and Operations—Fractions		0.51		
Book 2									
23	Multiple Choice	D	1	CCSS.Math.Content.3.MD.C.5b	Measurement and Data		0.94		
24	Multiple Choice	A	1	CCSS.Math.Content.3.OA.A.4	Operations and Algebraic Thinking		0.73		
25	Multiple Choice	C	1	CCSS.Math.Content.3.NF.A.1	Number and Operations—Fractions		0.85		

Released Questions on EngageNY

Grade 3 Question	Type	Key	Points	Standard	Cluster	Secondary	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)
26	Multiple Choice	D	1	CCSS.Math.Content.3.OA.A.2	Operations and Algebraic Thinking		0.63		
27	Multiple Choice	A	1	CCSS.Math.Content.3.MD.C.7a	Measurement and Data		0.91		
29	Multiple Choice	B	1	CCSS.Math.Content.3.OA.B.5	Operations and Algebraic Thinking		0.59		
30	Multiple Choice	B	1	CCSS.Math.Content.3.NBT.A.1	Number and Operations in Base Ten		0.60		
31	Multiple Choice	D	1	CCSS.Math.Content.3.OA.D.8	Operations and Algebraic Thinking		0.59		
32	Multiple Choice	B	1	CCSS.Math.Content.3.OA.A.3	Operations and Algebraic Thinking		0.76		
35	Multiple Choice	C	1	CCSS.Math.Content.3.MD.A.1	Measurement and Data		0.67		
36	Multiple Choice	D	1	CCSS.Math.Content.3.OA.B.6	Operations and Algebraic Thinking		0.78		
37	Multiple Choice	D	1	CCSS.Math.Content.3.NF.A.3b	Number and Operations—Fractions		0.60		
38	Multiple Choice	B	1	CCSS.Math.Content.3.NF.A.3d	Number and Operations—Fractions		0.60		
39	Multiple Choice	B	1	CCSS.Math.Content.3.MD.C.7b	Measurement and Data		0.64		
40	Multiple Choice	C	1	CCSS.Math.Content.3.OA.A.3	Operations and Algebraic Thinking		0.74		
41	Multiple Choice	B	1	CCSS.Math.Content.3.NF.A.2b	Number and Operations—Fractions		0.76		
43	Multiple Choice	D	1	CCSS.Math.Content.3.MD.C.6	Measurement and Data		0.88		
44	Multiple Choice	D	1	CCSS.Math.Content.3.OA.D.8	Operations and Algebraic Thinking		0.53		
Book 3									
45	Constructed Response		2	CCSS.Math.Content.3.NF.A.3d	Number and Operations—Fractions			0.98	0.49
46	Constructed Response		2	CCSS.Math.Content.3.MD.A.2	Measurement and Data			1.29	0.65

Released Questions on EngageNY

Grade 3 Question	Type	Key	Points	Standard	Cluster	Secondary	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)
47	Constructed Response		2	CCSS.Math.Content.3.G.A.2	Geometry			1.15	0.58
48	Constructed Response		2	CCSS.Math.Content.3.OA.D.9	Operations and Algebraic Thinking			0.97	0.49
49	Constructed Response		2	CCSS.Math.Content.3.NBT.A.3	Number and Operations in Base Ten			1.20	0.60
50	Constructed Response		3	CCSS.Math.Content.3.OA.A.3	Operations and Algebraic Thinking			1.80	0.60
51	Constructed Response		3	CCSS.Math.Content.3.MD.C.7d	Measurement and Data			0.90	0.30
52	Constructed Response		3	CCSS.Math.Content.3.OA.D.8	Operations and Algebraic Thinking			1.44	0.48

*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.