New England Common Assessment Program

Released Items 2005

Grade 6 Mathematics

Mathematics

1. On Saturday, Dora practiced playing her violin 5 times. Each time she practiced for 15 minutes. What is the total number of hours Dora practiced her violin on Saturday?

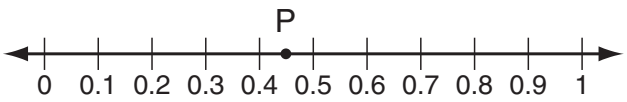
   A. $\frac{5}{15}$ hour

   B. $\frac{5}{6}$ hour

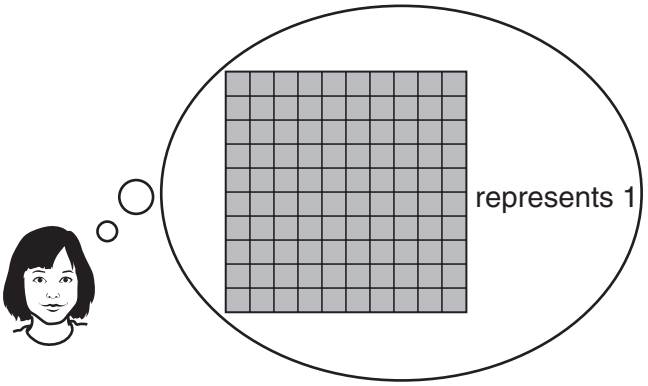
   C. $1\frac{1}{4}$ hours

   D. $2\frac{1}{2}$ hours

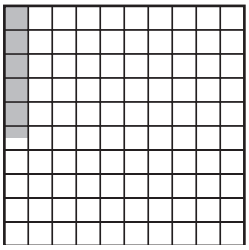
2 Look at this number line.



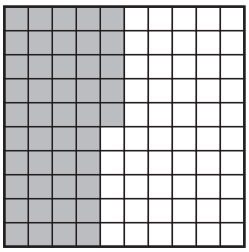
Which grid is shaded gray to represent the same decimal as the one marked with the letter P on the number line?



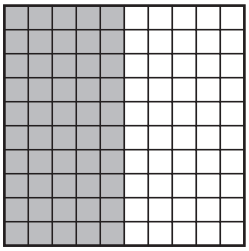
A.



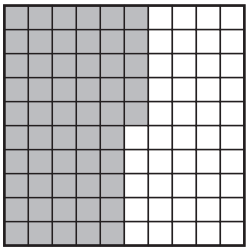
B.



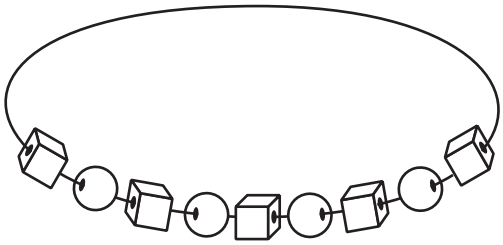
C.



D.



3 Samantha uses 4 round beads and 5 cube beads to make this necklace.



Samantha bought one package of 30 round beads and one package of 24 cube beads. How many of these necklaces can Samantha make?

A. 4

B. 5

C. 6

D. 7

4 A music teacher can arrange all of the chairs in the practice room into at least two rows with the same number of chairs in each row. Which number of chairs could **not** be in the practice room?

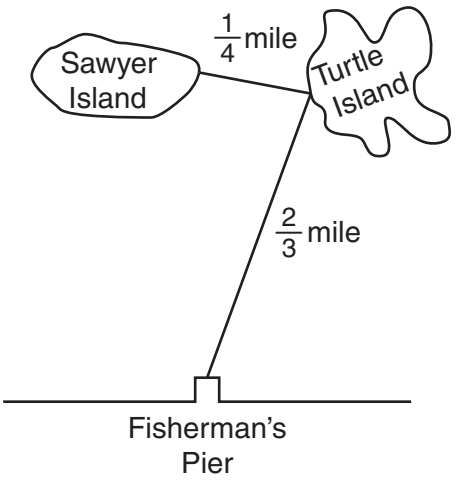
A. 25

B. 21

C. 19

D. 15

5 The map below shows the path a boat sailed.



The boat sailed from Sawyer Island to Turtle Island and then to Fisherman's Pier. What is the total distance the boat sailed?

A. $\frac{5}{12}$ mile

B. $\frac{3}{7}$ mile

C. $\frac{3}{4}$ mile

D. $\frac{11}{12}$ mile

6 Which property **must both** a rectangle and rhombus have?

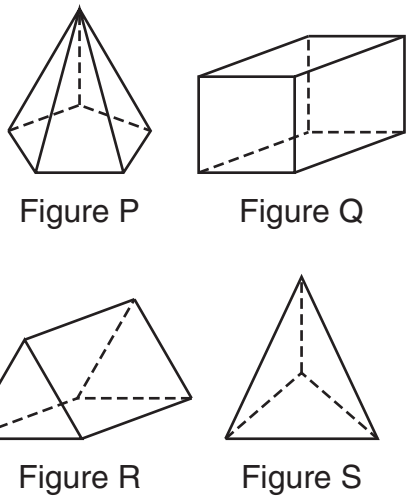
A. 4 right angles

B. 4 congruent sides

C. 2 pairs of acute angles

D. 2 pairs of parallel sides

7 Look at these figures.



Which two figures have the same number of faces?

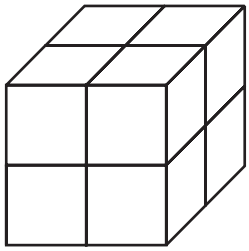
A. Figure P and Figure Q

B. Figure S and Figure R

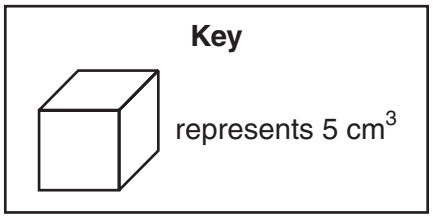
C. Figure P and Figure R

D. Figure S and Figure Q

8 Look at this structure.



Structure



What is the volume of this structure?

A. 8 cm^3
B. 20 cm^3
C. 40 cm^3
D. 60 cm^3

9 The table below shows the distance required for a car to stop when it is traveling at different speeds.

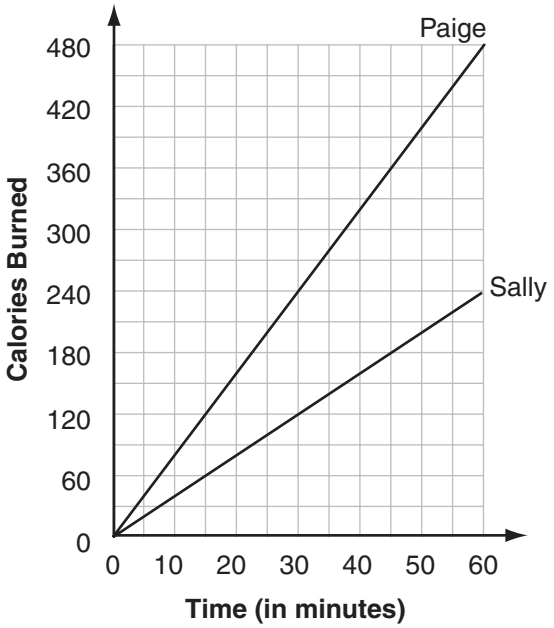
Speed	Distance Required to Stop
30 miles per hour	6 car lengths
40 miles per hour	9 car lengths
50 miles per hour	13 car lengths
60 miles per hour	18 car lengths
70 miles per hour	24 car lengths

If the pattern continues, what is the distance required for a car to stop if it is traveling at a speed of 80 miles per hour?

A. 27 car lengths
B. 28 car lengths
C. 30 car lengths
D. 31 car lengths

10 Paige rode her bike for one hour and Sally walked for one hour. The graph below shows the number of calories each girl burned.

Calories Burned During Exercise



How many more minutes did it take Sally to burn 120 calories than it took Paige?

A. 5
B. 15
C. 25
D. 30

11 Rosa is using number cards to make equivalent fractions, as shown below.

$$\frac{3}{12} = \frac{9}{\square}$$

What number belongs on the blank card?

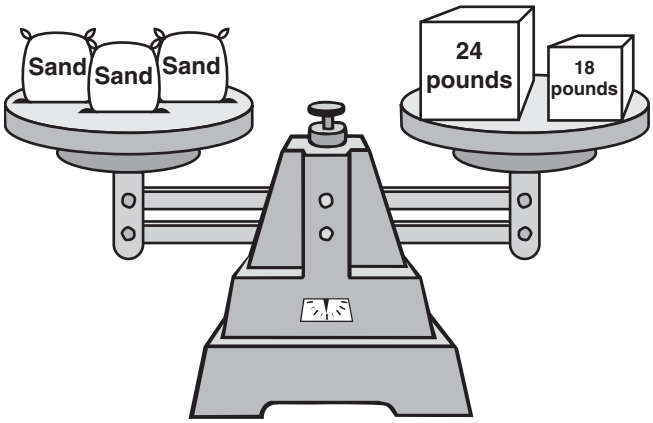
12 Draw an obtuse triangle.

13 Jesse and Kristy each bought a pizza of the **same size**.

- Jesse's pizza was cut into 3 equal slices. She ate 1 slice.
- Kristy's pizza was cut into 6 equal slices. She ate 2 slices.

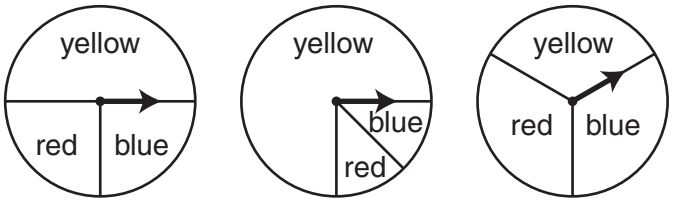
Explain using words, numbers, or pictures how Jesse did or did not eat the same amount of pizza as Kristy.

14 The scale shown below is balanced.



Each bag of sand weighs the same. How many pounds does one bag of sand weigh? Show your work or explain how you know.

15 Look at these spinners.



Spinner A **Spinner B** **Spinner C**

Julie, Greg, and Lori each used a different spinner to record the results of 40 spins.

a. This table shows Julie's results.

Julie's Spinner Results

Color	Frequency
yellow	12
blue	14
red	14

Which spinner did Julie **most likely** use? Show your work or explain how you know.

b. This table shows Greg's results.

Greg's Spinner Results

Color	Frequency
yellow	30
blue	5
red	5

Which spinner did Greg **most likely** use? Show your work or explain how you know.

c. Lori used the remaining spinner. Make a table to show the **most likely** results of Lori's 40 spins. Explain your reasoning.

Grade 6 Mathematics Released Item Information

Released Item Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Calculator Allowed	✓	✓	✓			✓	✓	✓	✓	✓		✓	✓	✓	✓
Content Strand[1]	NO	NO	NO	NO	NO	GM	GM	GM	FA	DP	NO	GM	NO	FA	DP
GLE Code	5-1	5-2	5-3	5-4	5-4	5-1	5-3	5-6	5-1	5-1	5-2	5-1	5-1	5-4	5-5
Depth of Knowledge Code	2	2	2	2	1	2	2	2	2	3	1	1	2	2	2
Item Type[2]	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	SA	SA	SA	SA	CR
Answer Key	C	B	A	C	D	D	A	C	D	B					
Total Possible Points	1	1	1	1	1	1	1	1	1	1	1	1	2	2	4

[1]Content Strand: NO = Numbers & Operations, GM = Geometry & Measurement, FA = Functions & Algebra, DP = Data, Statistics, & Probability

[2]Item Type: MC = Multiple-Choice, SA = Short Answer, CR = Constructed Response