DC Office of the State Superintendent of Education

District of Columbia

Comprehensive Assessment System

2009 Released Items
Sixth Grade Mathematics

The age of each dancer in a ballet class is listed below.

11 12 12 14 15 20 21

What is the mode of this data set?

F 10

G 12

H 14

J 15

Content: Mathematics Answer Key: G
Item Number: 10 Max. score points: 1

Item ID: 01007718 Standard: 6.DASP.1

Item Type: Multiple Choice Reporting Category: Data Analysis, Statistics &

Look at the set of data below.

11, 14, 18, 21, 21

Which of these data sets has the same median as the given set?

- **A** 14, 16, 17, 18, 20
- **B** 11, 13, 19, 20, 21
- C 13, 16, 18, 20, 25
- **D** 13, 16, 20, 21, 21

Content: Mathematics Answer Key: C Item Number: 37 Max. score points: 1

Item ID: 00880256 Standard: 6.DASP.1

Item Type: Multiple Choice Reporting Category: Data Analysis, Statistics &



The table below shows the temperatures recorded for five days in River Valley.

Temperatures in River Valley

Day	Temperature (in °F)
Monday	74
Tuesday	69
Wednesday	67
Thursday	71
Friday	69

Based on the information in the table, what was the <u>mean</u> temperature in River Valley during the five days?

F 67

G 69

H 70

J 74

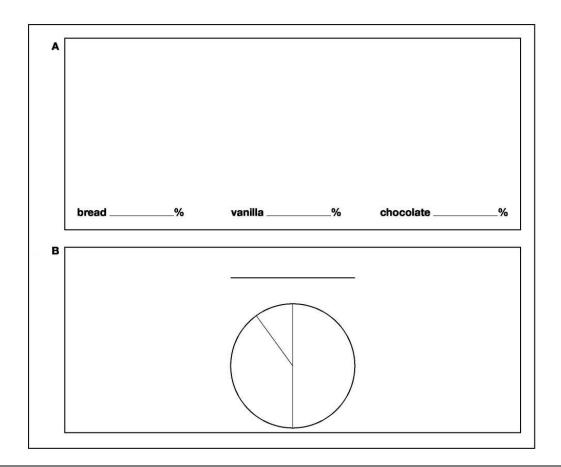
Content: Mathematics Answer Key: Harm Number: 52 Max. score points: 1

Item ID: 00788453 Standard: 6.DASP.1

Item Type: Multiple Choice Reporting Category: Data Analysis, Statistics &

After lunch, 40 students had a choice of bread pudding, vanilla pudding, or chocolate pudding for dessert.

- 4 students chose bread pudding
- 20 students chose vanilla pudding
- 16 students chose chocolate pudding
 - A What is the percentage of students who chose each type of pudding? In the box in the answer booklet, show your work and write your answers on the lines.
 - **B** In the box in the answer booklet, label the circle graph with titles and percentages.



Content: Mathematics

Item Number: 32

Item ID: 01172296

Item Type: Constructed Response

Answer Key:

Max. score points:

Standard: 6.DASP.2

Reporting Category: Data Analysis, Statistics &

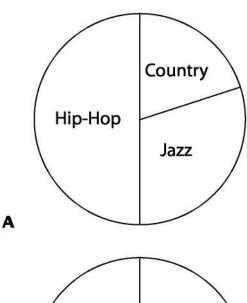
3

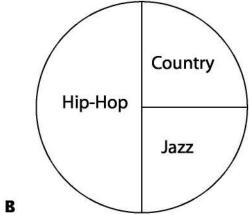


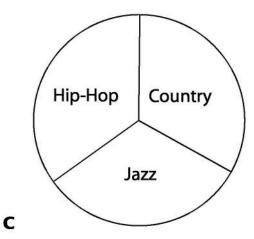
Alonzo has 50 CDs at home.

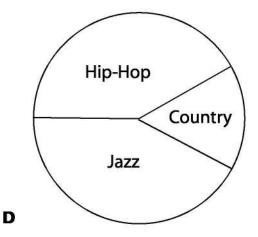
- 10 are Country music CDs
- 25 are Hip-Hop CDs
- 15 are Jazz music CDs

Which circle graph best shows the types of music Alonzo has on CDs?









Content: Mathematics

Item Number: 41

Item ID: 01007736

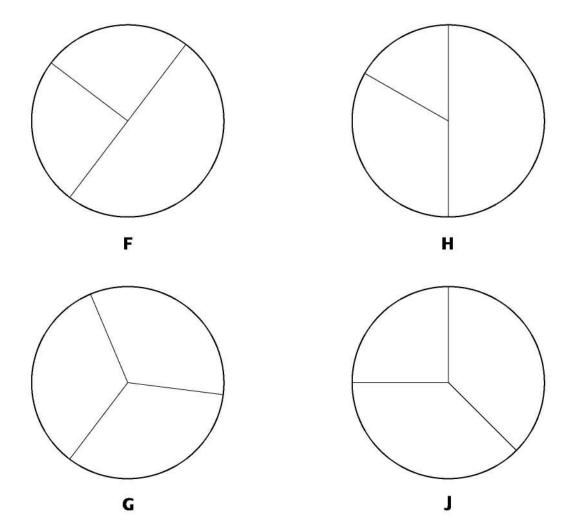
Item Type: Multiple Choice

Answer Key: A
Max. score points: 1

Standard: 6.DASP.2

Reporting Category: Data Analysis, Statistics &

A survey was done to find out if people liked a certain television show. One-half of the people surveyed answered "No." One-third answered "Yes." The rest of the people surveyed answered "No Opinion." Which circle graph could be used to show the results of this survey?



Content: Mathematics

Item Number: 58

Item ID: 00880238

Item Type: Multiple Choice

Answer Key: H
Max. score points: 1

Standard: 6.DASP.2

Reporting Category: Data Analysis, Statistics &



A stem-and-leaf plot is shown below.

Stem	Leaf	
1	0 4 4 8	_ ,
2	4689	
3	2 3	KEY
		1 0 = 10

How many times is the number 14 recorded in this stem-and-leaf plot?

1 2 3 4 A B C D

Content: Mathematics Answer Key: B
Item Number: 19 Max. score points: 1

Item ID: 00880300 Standard: 6.DASP.3

Item Type: Multiple Choice Reporting Category: Data Analysis, Statistics &

The stem-and-leaf plot below shows the length, in minutes, of each DVD in Tyrone's collection.

DVD lengths (in minutes)

Key: $4 \mid 8 = 48 \text{ minutes}$

How many of Tyrone's DVDs are longer than 45 minutes?

11 13 16 21 **F G H J**

Content: Mathematics Answer Key: H
Item Number: 56 Max. score points: 1

Item ID: 01007764 Standard: 6.DASP.3

Item Type: Multiple Choice Reporting Category: Data Analysis, Statistics &

The table shows the number of students enrolled in Ms. Lee's craft classes last year.

30	7	15	12	10	15	23	19	21	17	26	9

Which stem-and-leaf plot represents the data given in the table?

	Cı	raf	t C	la	s En	rollr	nent
0	7	9					
1	0	2	5	7	9		
2	1	3	6				
3	0						

		Craft Class Enrollment
	1	0 2 5 5 7 9
	2	1 3 6
	3	0
KEY	7	
1 0 = 10	9	
		L

KEY 2 3 = 23

H

20	Craft Class Enrollmen							
0	7	9						
1	10	12	15	15	17	19		
2	21	23	26					
3	30							

2
3

	Craft Class Enrollment						
0	7 9						
1	0 2 5 5 7 9						
2	1 3 6						
3	0						

KEY 2 | 1 = 21

G

J

Content: Mathematics

Item Number: 34

Item ID: 01172332

Item Type: **Multiple Choice** Answer Key: Max. score points:

Standard: 6.DASP.3

Reporting Category: Data Analysis, Statistics &

Probability



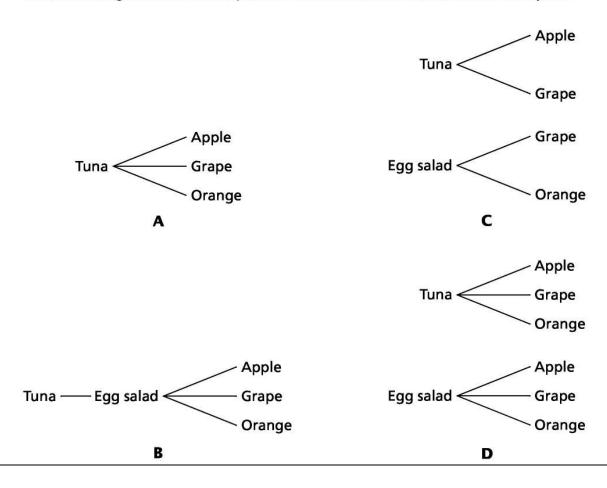
Office of the State Superintendent of Education

The table below shows the different types of sandwiches and juice available at Freddie's Corner Store.

Freddie's Corner Store

Sandwich	Juice
Tuna	Apple
Egg salad	Grape
	Orange

Which tree diagram shows all the possible combinations of one sandwich and one juice?



Content: Mathematics

Item Number: 13

Item ID: 01172288

Item Type: Multiple Choice

Answer Key: D
Max. score points: 1

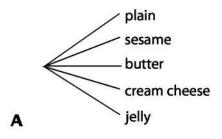
Standard: 6.DASP.4

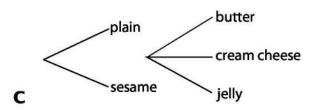
Reporting Category: Data Analysis, Statistics &

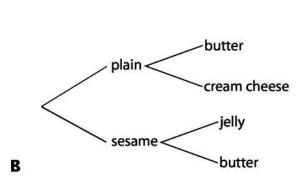
Raven can choose from the bagels and toppings shown in the table below.

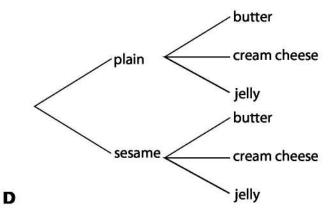
Bagels	Toppings
plain	butter
sesame	cream cheese
3	jelly

Which diagram shows all the possible ways Raven can choose one bagel with one topping?









Content: Mathematics

Item Number: 55

Item ID: 01007772

Item Type: Multiple Choice

Answer Key: D
Max. score points: 1

Standard: 6.DASP.4

Reporting Category: Data Analysis, Statistics &

Mia wants to choose a flower to put in her vase. She can choose either a rose (R) or a daisy (D). Each flower comes in these colors:

- Orange (O)
- Yellow (Y)
- Pink (P)

Which of these lists shows all the possible combinations of one flower and one color that Mia can choose?

- F RO, RY, DO, DY
- G RD, OY, OP, YP
- H RO, RY, RP, DO, DY, DP
- J RO, RY, RP, DO, DY, DP, RP

Content: Mathematics Answer Key: H
Item Number: 48 Max. score points: 1

Item ID: 01172336 Standard: 6.DASP.4

Item Type: Multiple Choice Reporting Category: Data Analysis, Statistics &



Samuel flips two coins at the same time. What is the probability that he will get at least one tail?

- $\mathbf{F} = \frac{1}{4}$
- $G \frac{1}{2}$
- $H = \frac{2}{3}$
- $J = \frac{3}{4}$

Content: Mathematics Answer Key: J Item Number: 48 Max. score points: 1

Item ID: 01172304 Standard: 6.DASP.6

Item Type: Multiple Choice Reporting Category: Data Analysis, Statistics &

The price of each item on a clearance rack in a department store is shown in the stem-and-leaf plot below.

Clearance Rack Prices

- A What is the range in prices of these items? Write your answer on the line in the answer booklet.
- **B** Two of the \$15 items on the clearance rack are sold. What is the new mode? On the line in the answer booklet, write your answer.

A		
В		

Content: Mathematics Answer Key:

Item Number: 63 Max. score points: 3

Item ID: 01007730 Standard: 6.DASP.6

Item Type: Constructed Response Reporting Category: Data Analysis, Statistics &

Antonio has a cube with one letter on each face: S, U, M, M, E, R. What is the probability that he will roll an M with one roll of the cube?

- **A** $\frac{1}{6}$
- **B** $\frac{1}{3}$
- **c** $\frac{1}{2}$
- $D = \frac{2}{3}$

Content: Mathematics Answer Key: Item Number: 53 Max. score points:

Item ID: 00880308 Standard: 6.DASP.7

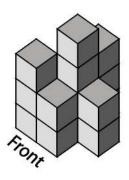
Item Type: Multiple Choice Reporting Category: Data Analysis, Statistics &

Probability

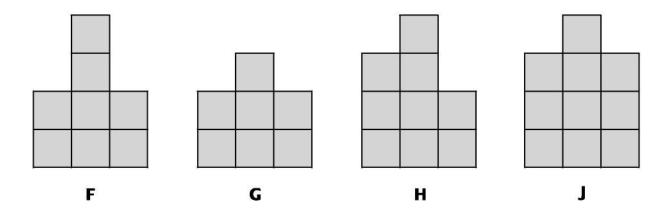
В

1

Look at the stack of blocks below.

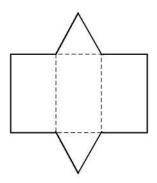


Which drawing represents the side view of this stack of blocks?



Content:MathematicsAnswer Key:JItem Number:12Max. score points:1Item ID:01007714Standard:6.G.1Item Type:Multiple ChoiceReporting Category:Geometry

Look at the picture of the net below.



Which of these solid figures can be formed by folding the net along the dotted lines?

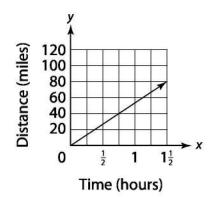
- F square pyramid
- **G** triangular prism
- **H** rectangular prism
- J rectangular pyramid

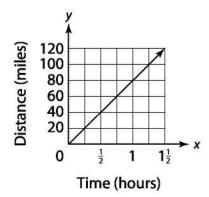
Content:MathematicsAnswer Key:GItem Number:14Max. score points:1Item ID:01172290Standard:6.G.1Item Type:Multiple ChoiceReporting Category:Geometry

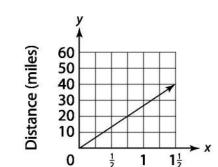
C

D

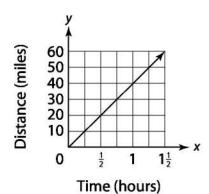
Which graph shows an average speed of 40 miles per hour?







A



B Time (hours)

Content:MathematicsAnswer Key:DItem Number:17Max. score points:1Item ID:01007746Standard:6.G.1Item Type:Multiple ChoiceReporting Category:Geometry

Which of the following shapes is never a view of a cylinder from any angle?

F a circle

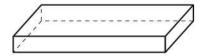
G a square

H a triangle

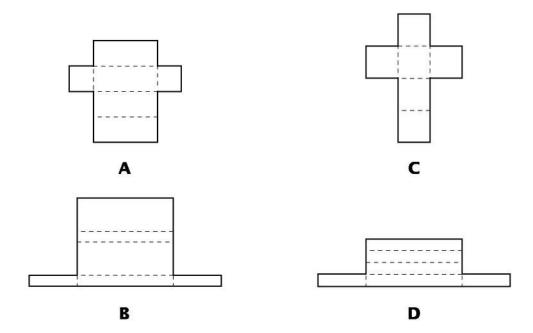
J a rectangle

Content:MathematicsAnswer Key:HItem Number:24Max. score points:1Item ID:00788515Standard:6.G.1Item Type:Multiple ChoiceReporting Category:Geometry

Look at the figure below.



Which of these nets will make the figure when folded?



Content:MathematicsAnswer Key:BItem Number:43Max. score points:1Item ID:00880258Standard:6.G.1Item Type:Multiple ChoiceReporting Category:Geometry

Cassie drew a triangle. She knows one angle of the triangle measures 35° and another angle measures 75°. What is the measure of the third angle of the triangle?

A 70°

B 75°

C 135°

D 180°

Content:MathematicsAnswer Key:AItem Number:7Max. score points:1Item ID:00788451Standard:6.G.2Item Type:Multiple ChoiceReporting Category:Geometry

An angle measures 80°. How many degrees are in the supplementary angle?

F 10°

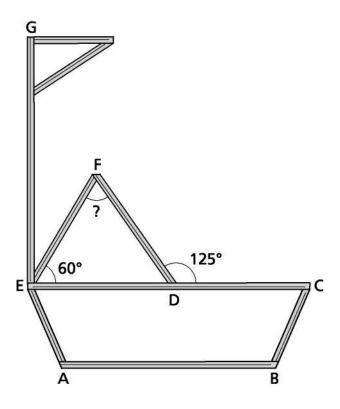
G 40°

H 100°

J 160°

Content:MathematicsAnswer Key:HItem Number:40Max. score points:1Item ID:01007738Standard:6.G.2Item Type:Multiple ChoiceReporting Category:Geometry

The figure below shows the side view of a boat Amy made with straws.



What is the measure of $\angle EFD$?

F 55°

G 65°

H 75°

J 85°

Content:MathematicsAnswer Key:Item Number:16Max. score points:Item ID:01172326Standard:Item Type:Multiple ChoiceReporting Category:

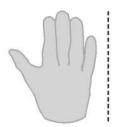
G

1

6.G.2

Geometry

Andrea reflected the picture below across the dotted line and then rotated it 90° clockwise around its center.



Which of these shows the picture after the reflection and rotation?







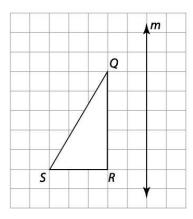


Content:MathematicsAnswer Key:Item Number:50Max. score points:Item ID:01172308Standard:

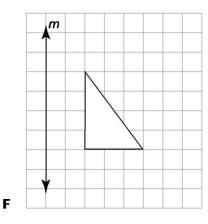
Item ID:01172308Standard:6.G.3Item Type:Multiple ChoiceReporting Category:Geometry

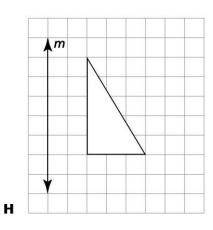
1

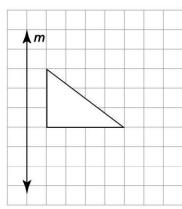
Triangle QRS is reflected across line m.

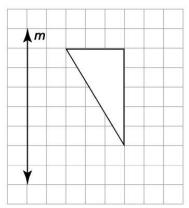


Which triangle results from this reflection?





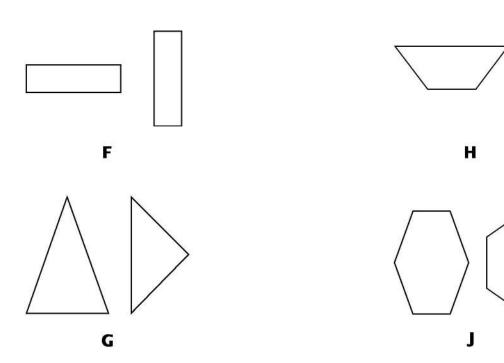




Content: Mathematics
Item Number: 54
Item ID: 01007760
Item Type: Multiple Choice

Answer Key: H
Max. score points: 1
Standard: 6.G.3
Reporting Category: Geometry

Which of these pairs of shapes appears to be congruent?



Content:MathematicsAnswer Key:FItem Number:62Max. score points:1Item ID:00880234Standard:6.G.3

Multiple Choice

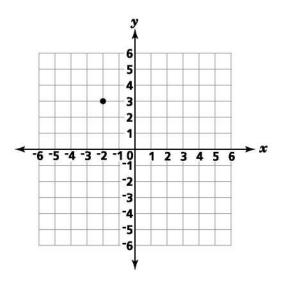
Item Type:

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Reporting Category:

Geometry

Which of the following ordered pairs describes the point on the coordinate grid below?



F (-2, 3)

G (3, -2)

H (-3, 2)

J (2, -3)

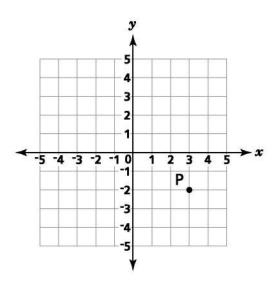
Content: Mathematics Answer Key:
Item Number: 20 Max. score points:
Item ID: 00788447 Standard:

Item ID:00788447Standard:6.G.4Item Type:Multiple ChoiceReporting Category:Geometry

F

1

Point P is shown on the coordinate grid below.



What are the coordinates of point P?

F (-2, 3)

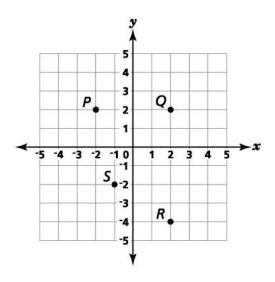
G (2, 3)

H (-3, -2)

J (3, ⁻2)

Content:MathematicsAnswer Key:JItem Number:64Max. score points:1Item ID:00880296Standard:6.G.4Item Type:Multiple ChoiceReporting Category:Geometry

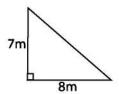
Which two points on the coordinate grid below have the same x coordinates?



- \mathbf{A} P and Q
- **B** Q and R
- \mathbf{C} R and P
- \mathbf{D} S and P

Content:MathematicsAnswer Key:BItem Number:69Max. score points:1Item ID:01172348Standard:6.G.4Item Type:Multiple ChoiceReporting Category:Geometry

Look at the figure below.



What is the area of the figure?

A 7.5 square meters

B 28 square meters

C 56 square meters

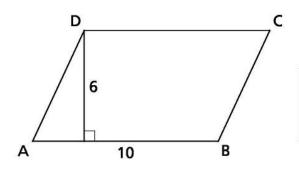
D 25.6 square meters

Content:MathematicsAnswer Key:BItem Number:31Max. score points:1Item ID:01007732Standard:6.M.2

Item Type: Multiple Choice Reporting Category: Measurement

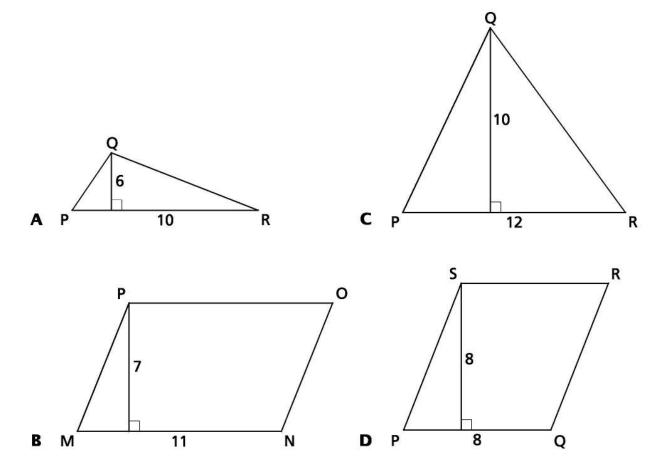


The figure below shows parallelogram ABCD.



Area of parallelogram = length \times height Area of triangle = $\frac{1}{2} \times$ base \times height

Which figure has the same area as parallelogram ABCD?



Content: Mathematics

Item Number: 51

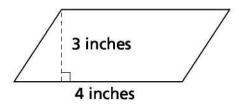
Item ID: 01172310

Item Type: Multiple Choice

Answer Key: C
Max. score points: 1
Standard: 6.M.2

Reporting Category: Measurement

A parallelogram is shown below.



Note: The figure is not drawn to scale.

What is the area of the parallelogram, in square inches?

A 6

B 7

C 12

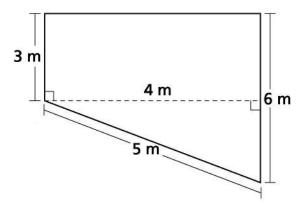
D 14

Content: Mathematics Answer Key: C
Item Number: 61 Max. score points: 1
Item ID: 00880252 Standard: 6.M.2

Item Type: Multiple Choice Reporting Category: Measurement



Look at the figure below.



Note: The figure is not drawn to scale.

What is the perimeter of the figure?

A 14 meters

B 18 meters

C 22 meters

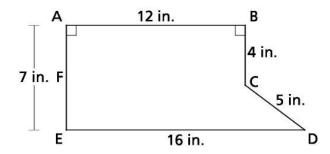
D 26 meters

Content:MathematicsAnswer Key:BItem Number:65Max. score points:1Item ID:00880278Standard:6.M.3

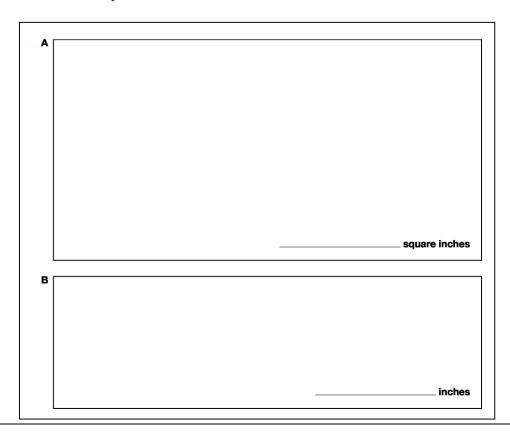
Item Type: Multiple Choice Reporting Category: Measurement



Jason drew the figure shown below.



- A What is the area, in square inches of the figure? Show your work in the box in the answer booklet. Your work should include a drawing of the figure divided into simpler figures to show the strategy you used to find the area. Write your answer on the line.
- **B** What is the perimeter, in inches, of the figure? Show your work in the box in the answer booklet and write your answer on the line.



Content: Mathematics Answer Key:

Item Number:32Max. score points:3Item ID:01172328Standard:6.M.3

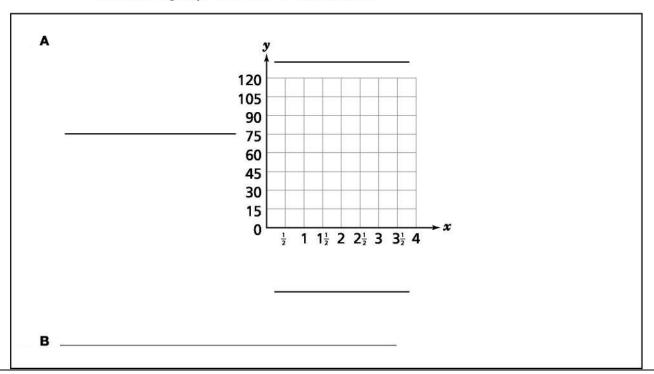
Item Type: Constructed Response Reporting Category: Measurement

Austin teaches violin lessons. His lesson fees are shown in the table below.

Violin Lessons

Time (in hours)	Fees
1/2	\$15
1 1/2	\$45
2 1/2	\$75
3 1/2	\$105

- A On the coordinate grid in the answer booklet, graph the data shown in this table. Be sure to label each axis appropriately and connect the points on the grid with a line.
- **B** On the line in the answer booklet, write an equation that can be used to find the total amount charged, *y*, for *x* hours of violin lessons.



Content: Mathematics Answer Key:

Item Number:28Max. score points:3Item ID:01007752Standard:6.M.4

Item Type: Constructed Response Reporting Category: Measurement

A model of a car is a 1:12 scale of an actual car. If the model has a length of $12\frac{1}{2}$ inches, what is the length of the actual car?

F 138 inches

G 144 inches

H 150 inches

J 156 inches

Content:MathematicsAnswer Key:HItem Number:46Max. score points:1Item ID:00880260Standard:6.M.4



Ryan needs 24 ounces of tomatoes to make 4 cups of soup. How many ounces of tomatoes does he need to make 9 cups of soup?

A 33

B 36

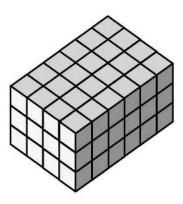
C 49

D 54

Content:MathematicsAnswer Key:DItem Number:15Max. score points:1Item ID:01172324Standard:6.M.4



Mr. Brown makes a stack of boxes shaped like a rectangular prism. Each box has a volume of 1 ft³.



$$V = LWH$$

What is the total volume of the stack of boxes?

F 26 ft³

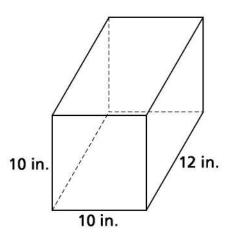
G 54 ft³

H 72 ft³

J 96 ft³

Content: Mathematics Answer Key: H
Item Number: 22 Max. score points: 1
Item ID: 01007750 Standard: 6.M.5

The picture below shows the dimensions of a box.



 $Volume = length \times width \times height$

What is the volume of the box?

F 120 square inches

G 120 cubic inches

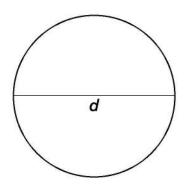
H 1,200 square inches

J 1,200 cubic inches

Content:MathematicsAnswer Key:JItem Number:68Max. score points:1Item ID:01172314Standard:6.M.5



Look at the circle below.



What is the circumference of the circle if the diameter, d, is 8?

 $F 4\pi$

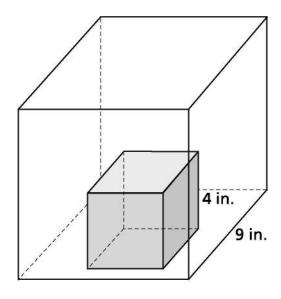
 \mathbf{G} 8 π

H 16π

 $J 24\pi$

Content: Mathematics Answer Key: G
Item Number: 44 Max. score points: 1
Item ID: 00880284 Standard: 6.M.7

Cole placed a small cube-shaped box inside a larger cube-shaped box, as shown in the figure below.



 $Volume = length \times width \times height$

He filled the empty space between the two cubes with sand. What is the volume, in cubic inches, of the sand used to fill the empty space?

A 125 cubic inches

B 390 cubic inches

C 665 cubic inches

D 793 cubic inches

Content: Mathematics Answer Key: C Item Number: 51 Max. score points: 1

Item ID: 01172342 Standard: 6.M.8



Annabelle has a goal of collecting 500 aluminum cans to recycle. So far, she has collected 25% of her goal. How many aluminum cans has Annabelle collected so far?

F 20G 125H 475J 12,500

Content: Mathematics Answer Key: G
Item Number: 4 Max. score points: 1

Item ID: 00880236 Standard: 6.NSO-C.8

Janet has 54 marbles. She gives 9 marbles to her sister and then packs the remaining marbles equally into 3 bags. How many marbles are there in each bag?

A 15

B 18

C 21

D 45

Content: Mathematics Answer Key: A Item Number: 67 Max. score points: 1

Item ID: 01172344 Standard: 6.NSO-C.8



Look at the equation below.

$$7 + (-12) = c$$

What is the value of c?

F -19

G -5

H 5

J 19

Content: Mathematics Answer Key: G
Item Number: 38 Max. score points: 1

Item ID: 00880306 Standard: 6.NSO-C.9

The table below shows the lengths of two naval aircrafts that were used as early as 1912.

Naval Aircrafts

Name	Length (in meters)		
Henri Farman	11.23		
Maurice Farman	12.05		

How many meters longer than a Henri Farman aircraft was a Maurice Farman aircraft?

A 0.82

B 1.22

C 1.82

D 23.28

Content: Mathematics Answer Key: A Item Number: 15 Max. score points: 1

Item ID: 01172292 Standard: 6.NSO-C.10

Peanuts cost \$2.50 per pound. Ariel bought some peanuts and paid \$5.00. How many pounds of peanuts did she buy?

A 0.18 pounds

B 0.56 pounds

C 1.80 pounds

D 2.00 pounds

Content: Mathematics Answer Key: D
Item Number: 45 Max. score points: 1

Item ID: 01007768 Standard: 6.NSO-C.10



$$\frac{3}{4}-\frac{5}{12}=$$

- A =
- $\mathbf{B} \quad \frac{1}{4}$
- $C = \frac{9}{12}$
- **D** $\frac{8}{16}$

Content: Mathematics Answer Key: A Item Number: 1 Max. score points: 1

Item ID: 00880232 Standard: 6.NSO-C.11

Lisa's puppy gained $1\frac{3}{4}$ pounds in the month of January. If it gained $2\frac{2}{5}$ pounds in February, how many pounds did the puppy gain in the months of January and February combined?

- **A** $3\frac{8}{9}$
- **B** $4\frac{3}{20}$
- **C** $5\frac{13}{20}$
- **D** $2\frac{1}{9}$

Content: Mathematics Answer Key: B
Item Number: 13 Max. score points: 1

Item ID: 01172320 Standard: 6.NSO-C.12

John paid \$40 for a floor rug. The marked price on the rug was \$50. What discount did John get on the rug?

A 10%

B 20%

C 25%

D 40%

Content: Mathematics Answer Key: B Item Number: 33 Max. score points: 1

Item ID: 01172298 Standard: 6.NSO-C.13

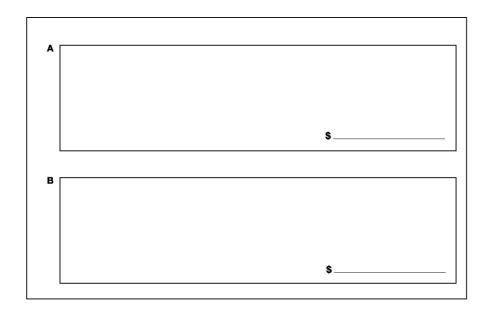


The picture below shows the sign James saw at a store.



The regular price of the bike is \$150.

- A What is the price of the bike during the sale? Show your work in the box in the answer booklet and write your answer on the line.
- B James needs a helmet to ride his bike. The regular price of the helmet he wants is \$15.00. There is a discount of 15%. What is the price of the helmet after the discount? Show your work in the box in the answer booklet and write your answer on the line.



Content: Mathematics Answer Key:

Item Number: 49 Max. score points:

Item ID: 01172338 Standard: 6.NSO-C.13

Item Type: Constructed Response Reporting Category: Number Sense & Operations



A company buys 50 staplers for \$250. If each stapler costs the same amount, how much does each stapler cost?

F \$2

G \$5

H \$20

J \$50

Content: Mathematics Answer Key: G
Item Number: 2 Max. score points: 1

Item ID: 00880242 Standard: 6.NSO-C.14



The Himalayan Mountains are growing about 12 inches higher every 5 years. If they continue to grow at this rate, how many years will it take them to grow about 60 inches?

A 5

B 10

C 25

D 144

Content: Mathematics Answer Key: C Item Number: 33 Max. score points: 1

Item ID: 01172330 Standard: 6.NSO-C.14



$$5^2 \times 5^6 =$$

A 5⁸

B 5¹²

 $C 25^8$

D 25¹²

Content: Mathematics Answer Key: A Item Number: 21 Max. score points: 1

Item ID: 00880272 Standard: 6.NSO-C.15



The length of the base of a parallelogram is 2^6 inches and the height is 2^2 inches. The area, in square inches, is $2^6 \times 2^2$. Which of these is equivalent to the area of the parallelogram?

- Δ 2³
- $B 2^4$
- $C 2^8$
- $D 2^{12}$

Content: Mathematics Answer Key: C Item Number: 35 Max. score points: 1

Item ID: 01172302 Standard: 6.NSO-C.15

Which of these is the best estimate of the answer to 967 + 239?

A 1,000

B 1,100

C 1,200

D 1,300

Content: Mathematics Answer Key: C Item Number: 23 Max. score points: 1

Item ID: 00880304 Standard: 6.NSO-E.18



A stadium has 18 sections of seats. Each section has 3,325 seats. Which of these is the <u>best</u> estimate of the total number of seats in this stadium?

A 30,000

B 40,000

C 50,000

D 60,000

Content: Mathematics Answer Key: D
Item Number: 47 Max. score points: 1

Item ID: 01007742 Standard: 6.NSO-E.18



The expression below can be used to find the amount of interest, in dollars, Mr. Richards earned on his savings account last year.

 600×0.04

How much interest did Mr. Richards earn on his savings account last year?

F \$0.24

G \$2.40

H \$24.00

\$240.00

Content: Mathematics Answer Key: H
Item Number: 18 Max. score points: 1

Item ID: 01007716 Standard: 6.NSO-N.1

Which list shows the fractions in order from least to greatest?

A
$$\frac{3}{10}$$
, $\frac{1}{2}$, $\frac{2}{5}$

B
$$\frac{1}{2}$$
, $\frac{2}{5}$, $\frac{3}{10}$

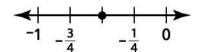
c
$$\frac{2}{5}$$
, $\frac{3}{10}$, $\frac{1}{2}$

D
$$\frac{3}{10}, \frac{2}{5}, \frac{1}{2}$$

Content: Mathematics Answer Key: D
Item Number: 25 Max. score points: 1

Item ID: 00880262 Standard: 6.NSO-N.2

Look at the number line below.



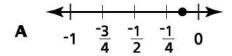
Which number falls on the point on this number line?

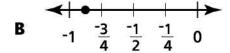
- **A** $-\frac{1}{2}$
- **B** $-\frac{1}{3}$
- $\mathbf{c} = \frac{1}{2}$
- $D = \frac{1}{2}$

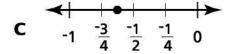
Content: Mathematics Answer Key: A ltem Number: 27 Max. score points: 1

Item ID: 01007726 Standard: 6.NSO-N.2

Which of these number lines correctly shows the fraction $\frac{1}{8}$?







Content: Mathematics Answer Key: A Item Number: 67 Max. score points: 1

Item ID: 01172312 Standard: 6.NSO-N.2

Which of these is equivalent to $\frac{8}{3}$?

A 1.33

B 2.33

C 2.66

D 8.33

Content: Mathematics Answer Key: C Item Number: 3 Max. score points: 1

Item ID: 00880246 Standard: 6.NSO-N.4



Which of these is equivalent to the fraction $\frac{1}{6}$?

F 0.16

G 0.16

H 0.16

J 1.6

Content: Mathematics Answer Key: H
Item Number: 50 Max. score points: 1

Item ID: 01172340 Standard: 6.NSO-N.4



Look at the fractions below.

$$\frac{18}{48}$$
, $\frac{3}{8}$, $\frac{12}{28}$, $\frac{27}{72}$

Which one of these fractions is not equivalent to the other three?

- $F = \frac{18}{48}$
- **G** $\frac{3}{8}$
- $H = \frac{12}{28}$
- $\int \frac{27}{72}$

Content: Mathematics Answer Key: H
Item Number: 70 Max. score points: 1

Item ID: 01172318 Standard: 6.NSO-N.5

- A On the line in the answer booklet, list all the factors of 6.
- **B** On the line in the answer booklet, list all the factors of 12.
- C What is the greatest common factor of 6 and 12? Write your answer on the lines in the answer booklet and explain how you found your answer.

A			
В			
c	_		

Content: Mathematics Answer Key:

Item Number: 11 Max. score points: 3

Item ID: 00880298 Standard: 6.NSO-N.6

Item Type: Constructed Response Reporting Category: Number Sense & Operations

Roger goes to the local library once every 12 days, and Jason goes once every 18 days. Both students were at the library today. When is the next time Roger and Jason will be at the library on the same day?

F after 12 days

G after 24 days

H after 36 days

J after 72 days

Content: Mathematics Answer Key: H
Item Number: 70 Max. score points: 1

Item ID: 01172350 Standard: 6.NSO-N.6



What is 71,882.5047 rounded to the nearest thousandth?

A 70,000.000

B 71,882.504

C 71,882.505

D 72,000.000

Content: Mathematics Answer Key: C Item Number: 59 Max. score points: 1

Item ID: 00880282 Standard: 6.NSO-N.7



What is the value of x in the equation $x - \frac{1}{2} = \frac{5}{2}$?

F 2

G 3

H 5

J 6

Content:MathematicsAnswer Key:GItem Number:16Max. score points:1Item ID:01172294Standard:6.PRA.1

What value of n makes the equation below true?

$$1\frac{5}{6} + n = 2\frac{1}{2}$$

- $-\frac{2}{3}$
- $G = \frac{2}{3}$
- H $-1\frac{1}{3}$
- J 4

Content: Mathematics Answer Key: G
Item Number: 26 Max. score points: 1

Item ID: 01007724 Standard: 6.PRA.1

Look at the equation below.

$$\frac{1}{4}+x=\frac{7}{8}$$

What is the value of x in the equation?

- $F = \frac{2}{3}$
- **G** $\frac{5}{8}$
- $H = \frac{3}{2}$
- $J = \frac{9}{8}$

Content: Mathematics Answer Key: G
Item Number: 30 Max. score points: 1

Item ID: 00880254 Standard: 6.PRA.1

Miriam runs at a speed of m. Angie runs at a speed of a. Angie runs 3 times as fast as Miriam. Which of these equations represents this relationship?

F a = m + 3

G m = a + 3

 \mathbf{H} $a = 3 \times m$

 $J m = 3 \times a$

Content: Mathematics Answer Key: H
Item Number: 8 Max. score points: 1
Item ID: 00880276 Standard: 6.PRA.2

A store had 163 hats. A few weeks later, there were 89 hats left. Which equation can be used to find the number of hats, h, that had been sold during that period?

- **A** h 89 = 163
- **B** 89 h = 163
- **C** h 163 = 89
- **D** 163 h = 89

Content: Mathematics Answer Key: D
Item Number: 29 Max. score points: 1

Item ID: 01007728 Standard: 6.PRA.2



The time Nora took to swim one lap today was 0.08 seconds faster than her time yesterday. If she took 59 seconds to swim the lap today, which equation can be used to find how many seconds she took to swim the lap yesterday?

 \mathbf{F} x + 0.08 = 59

G 0.08 + 59 = x

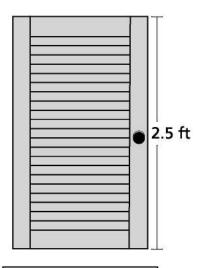
H $x = 59 \times 0.08$

J 0.08x = 59

Content: Mathematics Answer Key: G
Item Number: 14 Max. score points: 1
Item ID: 01172322 Standard: 6.PRA.2



The picture below shows the cabinet door that Jordan wants to order while remodeling his kitchen.



1 foot = 12 inches

What is the height, in inches, of the cabinet door?

F 4.8

G 14.5

H 24

J 30

Content: Mathematics Answer Key: J Item Number: 34 Max. score points: 1

Item ID: 01172300 Standard: 6.PRA.3

What is the value of the following expression when x = 9?

2x - 8 =

A 1

B 10

C 18

D 21

Content: Mathematics Answer Key: B
Item Number: 9 Max. score points: 1
Item ID: 00788393 Standard: 6.PRA.4

Look at the expression below.

$$2a + 3c + 4a + 5c$$

Which of these is equivalent to the expression?

- **A** 14ac
- **B** 6a + 8c
- C 5a + 9c
- **D** 5ac + 9ac

Content: Mathematics Answer Key: B
Item Number: 57 Max. score points: 1
Item ID: 00880302 Standard: 6.PRA.4

The expression below can be used to find the sum of three consecutive odd, positive integers.

$$x + (x + 2) + (x + 4)$$

What is the sum of these integers, if x = 5?

- **A** 16
- **B** 19
- **C** 21
- **D** 35

Content: Mathematics Answer Key: C
Item Number: 69 Max. score points: 1
Item ID: 01172316 Standard: 6.PRA.4

Jeremy has x number of goldfish. He also has 3 times as many guppies and 7 times as many angelfish as he does goldfish. The expression below represents the total number of fish Jeremy has, where x represents the number of goldfish.

$$x + 3x + 7x$$

If Jeremy has 5 goldfish, what is the total number of fish that Jeremy has all together?

- **A** 11
- **B** 16
- **C** 50
- **D** 55

Content:MathematicsAnswer Key:DItem Number:35Max. score points:1Item ID:01172334Standard:6.PRA.4

Which of these equations is equivalent to 2x = 10?

A x + 5 = 10 + 5

B x + 5 = 10 + 2x

C 2x + 5 = 10 + 5

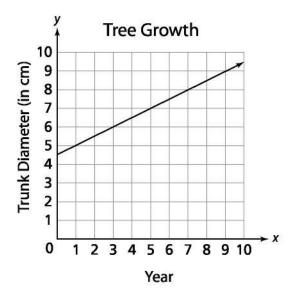
D 2x + 5 = 10 + 2x

Content: Mathematics Answer Key: C
Item Number: 5 Max. score points: 1
Item ID: 00880344 Standard: 6.5

Item ID: 00880244 Standard: 6.PRA.5



Deshauna made a graph of how the diameter of a tree trunk changed over a period of ten years.



At what rate is the diameter of the trunk increasing?

F 1 centimeter every 2 years

G 2 centimeters every year

H 4.5 centimeters every 10 years

J 9.5 centimeters every 10 years

F Content: Mathematics Answer Key: Max. score points: Item Number: 60 1

Item ID: 01007766 Standard: 6.PRA.5

George has x number of stamps in his stamp collection. Two times the number of stamps in his collection is equal to 50. The equation below can be used to find the total number of stamps in George's collection.

$$2x = 50$$

Which of these equations, when solved, will have the same value for x as 2x = 50?

F 2x - 2 = 25

2x + 2 = 48

H 2x + 2 = 52

2x - 2 = 100

Content: Mathematics Answer Key: Н Item Number: 68 Max. score points: 1

Item ID: 01172346 Standard: 6.PRA.5



Which of these equations is equivalent to 3x = 15?

A
$$\frac{x}{3} = \frac{15}{3}$$

B
$$\frac{3x}{3} = \frac{15}{3}$$

C
$$\frac{3x}{3} = 15$$

D
$$3x = \frac{15}{3}$$

Content: Mathematics Answer Key: B Item Number: 39 Max. score points: 1

Item ID: 00880274 Standard: 6.PRA.6

Look at the equation below.

$$3x + 3 = 6$$

Which of the following is equal to this equation?

x = -1

x = 1

x = 3

x = 6

G Content: Mathematics Answer Key: Max. score points: Item Number: 66 1

Item ID: 00788418 Standard: 6.PRA.6



Look at the table below.

x	у
0	3
1	6
2	9
3	12

Which of these equations represents the relationship between x and y in the table?

F
$$y = x^3$$

G
$$y = 3x$$

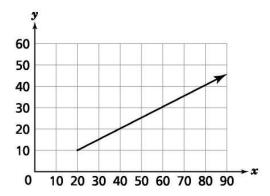
H
$$y = x + 3$$

J
$$y = 3x + 3$$

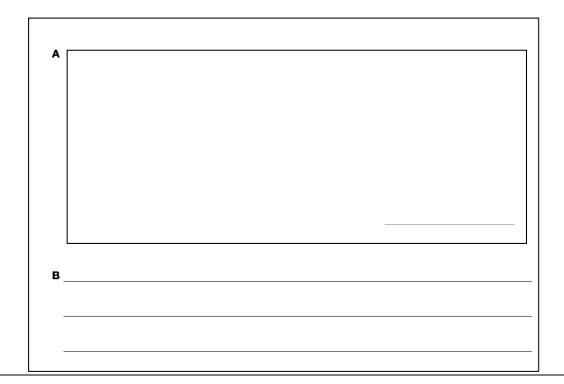
Content: Mathematics Answer Key: Max. score points: Item Number: 6

Item ID: 00880248 Standard: 6.PRA.8

Reporting Category: Item Type: **Multiple Choice** Patterns, Relations & Algebra The graph below shows the values of y for different values of x.



- A Identify the relationship between x and y and use the relationship to find the value of x when y = 45. Show your work in the box in the answer booklet and write your answer on the line.
- **B** Describe the graph of the relationship y = 4x. Write your answer on the lines in the answer booklet.



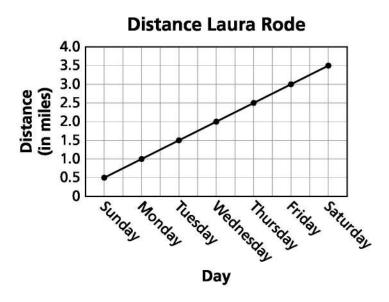
Content: Mathematics Answer Key:

Item Number: 49 Max. score points: 3

Item ID: 01172306 Standard: 6.PRA.8

Item Type: Constructed Response Reporting Category: Patterns, Relations & Algebra

The graph below shows how many miles Laura rode her bike each day during one week.



If Laura continues to ride her bike as shown in the graph, how many miles will she ride on Tuesday of the following week?

1.5 miles

G 4 miles

5 miles

J 6.5 miles

Content: Mathematics Answer Key: Н Item Number: 36 Max. score points: Item ID:

00788439 Standard: 6.PRA.9