



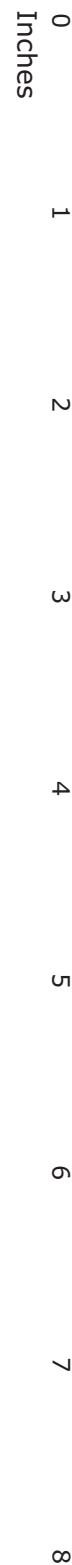
State of Texas Assessments of Academic Readiness

GRADE 5

Mathematics

Practice Assessment

STAAR GRADE 5 MATHEMATICS REFERENCE MATERIALS



PERIMETER

Square

$$P = 4s$$

Rectangle

$$P = 2l + 2w$$

AREA

Square

$$A = s \times s$$

Rectangle

$$A = l \times w$$

or

$$A = bh$$

VOLUME

Cube

$$V = s \times s \times s$$

Rectangular prism

$$V = l \times w \times h$$

or

$$V = Bh$$

STAAR GRADE 5 MATHEMATICS REFERENCE MATERIALS

LENGTH

Customary

1 mile (mi) = 1,760 yards (yd)

1 yard (yd) = 3 feet (ft)

1 foot (ft) = 12 inches (in.)

Metric

1 kilometer (km) = 1,000 meters (m)

1 meter (m) = 100 centimeters (cm)

1 centimeter (cm) = 10 millimeters (mm)

VOLUME AND CAPACITY

Customary

1 gallon (gal) = 4 quarts (qt)

1 quart (qt) = 2 pints (pt)

1 pint (pt) = 2 cups (c)

1 cup (c) = 8 fluid ounces (fl oz)

Metric

1 liter (L) = 1,000 milliliters (mL)

WEIGHT AND MASS

Customary

1 ton (T) = 2,000 pounds (lb)

1 pound (lb) = 16 ounces (oz)

Metric

1 kilogram (kg) = 1,000 grams (g)

1 gram (g) = 1,000 milligrams (mg)

20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
Centimeters

MATHEMATICS

DIRECTIONS

Read each question carefully. Choose the best answer to each question. For open-response questions, determine the best answer to the question.

- 1 A recipe for one batch of cookies uses 1.25 cups of butter. How many cups of butter are needed to make 6 batches of cookies?

(A) 7.5 cups
(B) 4.75 cups
(C) 7.25 cups
(D) 6.5 cups

- 2 Which numbers have a value less than 1.069?

Select **TWO** correct answers.

1.08
 1.1
 1.052
 1.071
 1.003

- 3** Dyna's house is 6.85 kilometers from Carl's house. Sanjay's house is $2\frac{3}{10}$ kilometers closer to Carl's house than Dyna's house is.

What is the distance in kilometers from Sanjay's house to Carl's house?

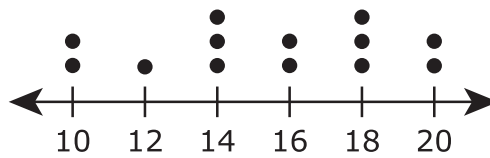
- (A) 9.15 km
- (B) 4.55 km
- (C) 8.15 km
- (D) 4.82 km

- 4 The list shows the number of minutes it took each student in a class to present a science project.

12 10 18 20 14 14 10 18 20 10 16 14 18 16 18

Cecelia is making the dot plot shown to display the data. Which two data points does Cecelia still need to add to the dot plot?

Science Project Presentations



Number of Minutes
Each ● means 1 student.

Select **ONE** correct answer in each box to complete the sentence.

Cecelia still needs to add one dot to

(A) 10
(B) 12
(C) 14

 minutes and

one dot to

(A) 16
(B) 18
(C) 20

 minutes.

- 5 The table represents a relationship between x and y .

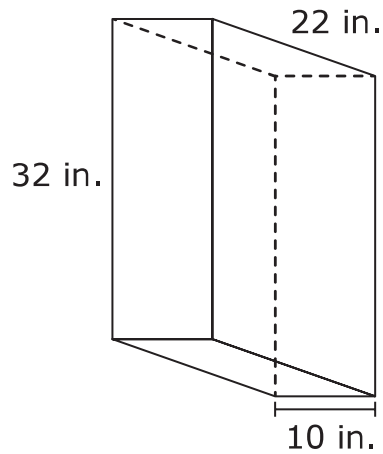
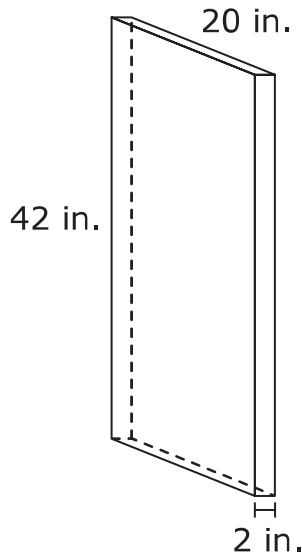
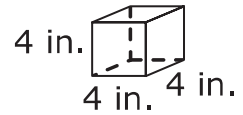
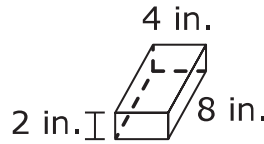
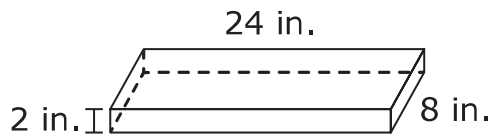
x	y
4	14
8	18
16	26
32	42

Which statement about the relationship between x and y is true?

- (A) It is a multiplicative pattern because each x -value is a multiple of 4.
- (B) It is a multiplicative pattern because each y -value is a multiple of 2.
- (C) It is an additive pattern because each y -value can be determined by finding the sum of the previous x - and y -values.
- (D) It is an additive pattern because each y -value is determined by adding 10 to the corresponding x -value.

6 Which rectangular prisms have a volume of 64 cubic inches?

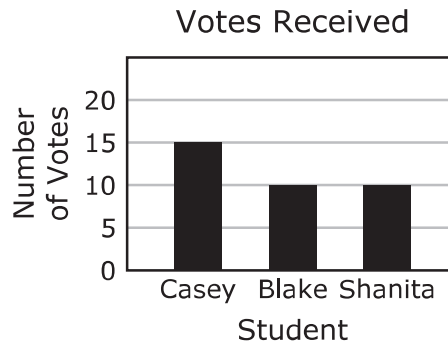
Circle **TWO** correct answers.



7 A farmer divided 124.8 pounds of berries equally into 8 baskets. How many pounds of berries went into each basket?

- (A) 1.56 lb
- (B) 10.6 lb
- (C) 3.1 lb
- (D) 15.6 lb

- 8 Three students ran for class president. The bar graph shows the number of votes each student received.



What fraction of the total votes received were for Casey?

- (A) $\frac{3}{4}$
- (B) $\frac{3}{7}$
- (C) $\frac{1}{15}$
- (D) $\frac{1}{3}$
-

- 9 A jar contains 110 coins. There are 15 quarters and 62 nickels. The rest of the coins are dimes.

Which equation can be used to find d , the total number of dimes in the jar?

- (A) $d = 110 + 62 - 15$
- (B) $d = 110 - 62 + 15$
- (C) $d = 110 + 62 + 15$
- (D) $d = 110 - 62 - 15$

10 What is the value of the expression shown?

$$(8 \times 4 + 2) \div 2$$

- (A) 24
 - (B) 9
 - (C) 17
 - (D) 33
-

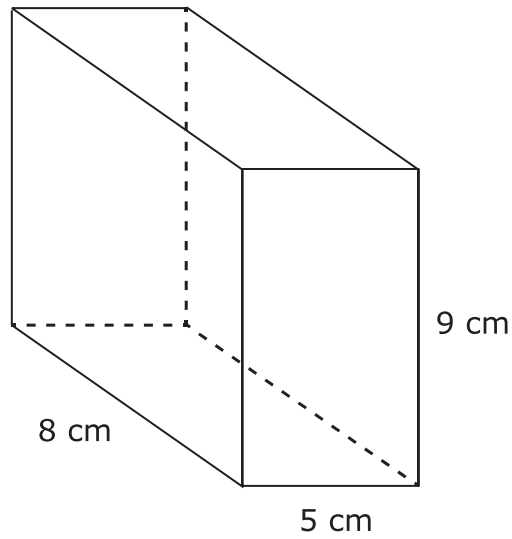
11 An expression is shown.

$$8\frac{1}{2} + 3 - 1\frac{1}{4}$$

What is the value of the expression?

Record your answer in the space provided.

- 12** The rectangular prism shown has dimensions in centimeters.



The prism will be completely filled with unit cubes that each have a volume of 1 cubic centimeter. How many of these cubes are needed to fill the prism?

- (A) 360
- (B) 22
- (C) 117
- (D) 44

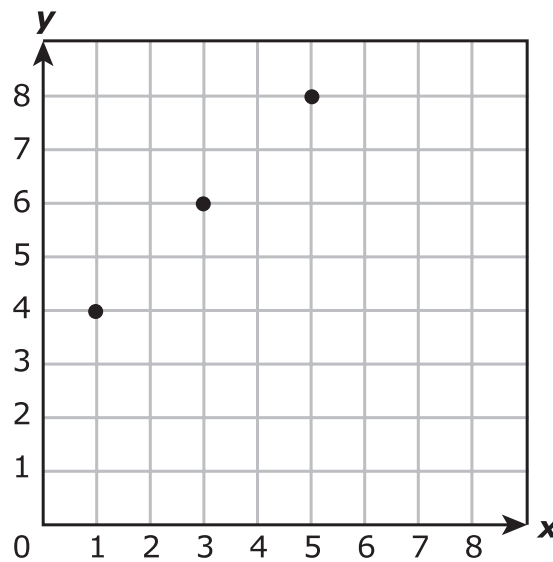
-
- 13** A shop ordered 362 candles for \$15 each. What was the total cost of the candles?

- (A) \$6,670
- (B) \$2,172
- (C) \$5,120
- (D) \$5,430

14 In which number is the digit 5 in the hundredths place?

- (A) 4,562.87
- (B) 1,642.705
- (C) 7,623.159
- (D) 8,236.506

15 The points on the grid represent values for $y = x + 3$.



Which ordered pairs represent other points on the graph for this equation?

Select **TWO** correct answers.

- (4, 1)
- (0, 3)
- (2, 6)
- (5, 2)
- (4, 7)

16 Sahil made a wooden train that was 185 centimeters long. What is the length of the train in meters?

- Ⓐ 1.85 m
 - Ⓑ 0.185 m
 - Ⓒ 18,500 m
 - Ⓓ 185,000 m
-

17 Which number is a composite number?

- Ⓐ 89
- Ⓑ 67
- Ⓒ 51
- Ⓓ 73

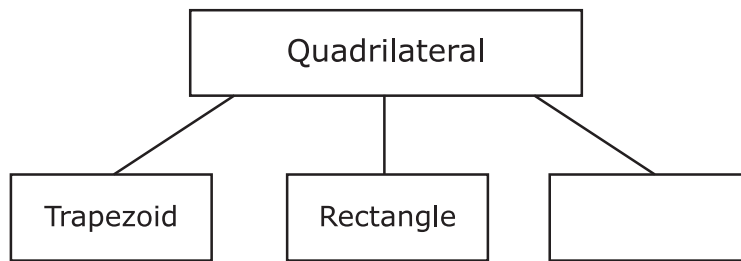
- 18** The values in the table represent the equation $y = x + 6$. Complete the table to represent the relationship between the values of x and y .

Select the correct answer for each box. Each answer may be used more than once. Not all answers will be used.

A 4 **B** 13 **C** 16 **D** 18 **E** 25 **F** 30

x	y
10	(A) (B) (C) (D) (E) (F)
(A) (B) (C) (D) (E) (F)	19
24	(A) (B) (C) (D) (E) (F)

19 The graphic organizer shows the relationship between some shapes.



Which shape could go in the empty box to correctly complete the graphic organizer?

- (A) Pentagon
- (B) Hexagon
- (C) Triangle
- (D) Rhombus

20 What is the value of $18 \div \frac{1}{2}$?

- (A) 9
- (B) $\frac{1}{9}$
- (C) 36
- (D) $\frac{1}{36}$

- 21** Pedro measured the amount of water in five different fish tanks. The table shows four of his measurements.

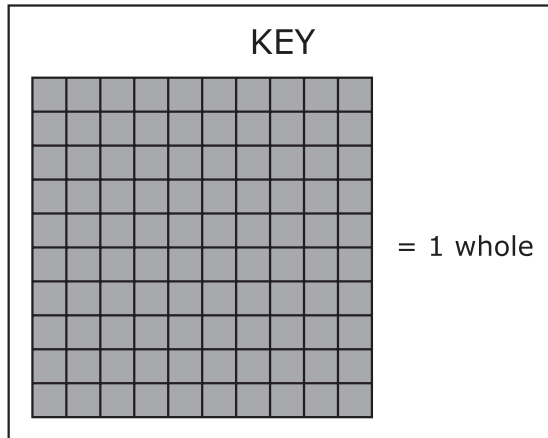
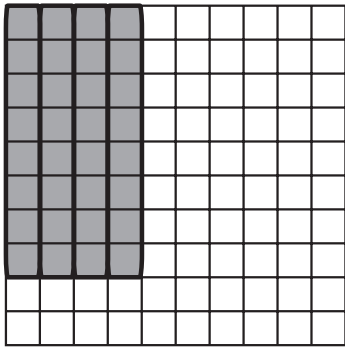
Water in Fish Tanks

Tank	Amount of Water (gallons)
V	10.1
W	10.019
X	10.9
Y	?
Z	10.009

Tank Y has the second least amount of water. Which of these could be the amount of water in Tank Y?

- (A) 10.005 gallons
- (B) 10.015 gallons
- (C) 10.09 gallons
- (D) 10.04 gallons

22 The model shown represents a division equation.

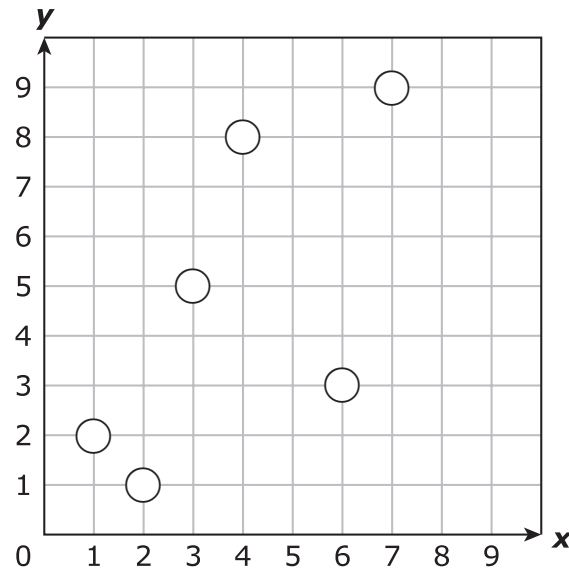


Which equation could be represented by the model?

- (A) $32 \div 4 = 8$
- (B) $0.32 \div 4 = 0.08$
- (C) $0.8 \div 4 = 0.2$
- (D) $8 \div 4 = 2$

- 23** Which points on the coordinate grid represent ordered pairs where the y -coordinate is 2 times the x -coordinate?

Shade the **TWO** correct circles that represent the points.



-
- 24** It took Janelle 12.75 hours to read a book. She read for the same amount of time each day for 5 days. What was the total amount of time, in hours, she spent reading the book each day?

- (A) 2.11 h
- (B) 2.55 h
- (C) 63.75 h
- (D) 17.75 h

25 Mishail's budget for June showed an income of \$80 and expenses of \$100. Which actions could Mishail take to balance her budget for June?

- (A) Increase expenses and decrease income
 - (B) Increase expenses and increase income
 - (C) Decrease expenses and decrease income
 - (D) Decrease expenses and increase income
-

26 What is the value of the expression shown?

$$5[6.2 - 3(1.6)]$$

- (A) 7
 - (B) 26.2
 - (C) 23
 - (D) 25.6
-

27 Trevor bought 6 shirts for \$12.80 each. What was the total cost of the 6 shirts?

- (A) \$18.80
- (B) \$100.80
- (C) \$76.80
- (D) \$72.80

- 28** Complete the steps that could be used to plot the point at (4, 10) on a coordinate grid.

Select **ONE** correct answer in each box to complete each sentence.

Step 1: Start at the origin.

Step 2: Move

Ⓐ 4 units
Ⓑ 10 units

 to the right.

Step 3: Move

Ⓐ 4 units
Ⓑ 10 units

Ⓐ up
Ⓑ down

.

Step 4: Plot the point.

- 29** Enzo practiced the violin for 30 minutes on all 7 days last week. This week, he practiced for 35 minutes on all 7 days.

Which equation can be used to find m , the total number of minutes Enzo practiced the violin during these two weeks?

- Ⓐ $m = (7 \times 30) + (7 \times 35)$
- Ⓑ $m = 7 \times (30 \times 35)$
- Ⓒ $m = (7 + 30) \times (7 + 35)$
- Ⓓ $m = 7 + (30 + 35)$

- 30** This stem and leaf plot shows the number of books that were checked out of a library each hour on Saturday.

Books Checked Out
on Saturday

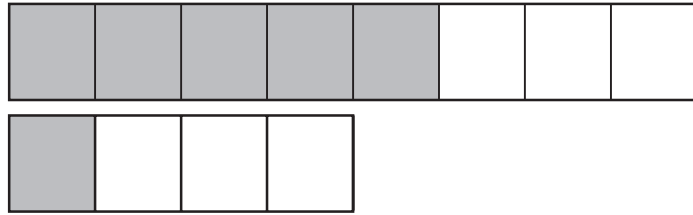
Stem	Leaf
1	0 5 6
2	1 4 4
3	2 5

2|1 means 21 books.

What is the total number of books that were checked out on Saturday?

- (A) 153
- (B) 167
- (C) 177
- (D) 143

- 31** Beth and Noah shared a box of chocolates. The models are shaded to show the fraction of the box of chocolates each of them ate.



What fraction of the box of chocolates did Beth and Noah eat altogether? What fraction of the box of chocolates is left over?

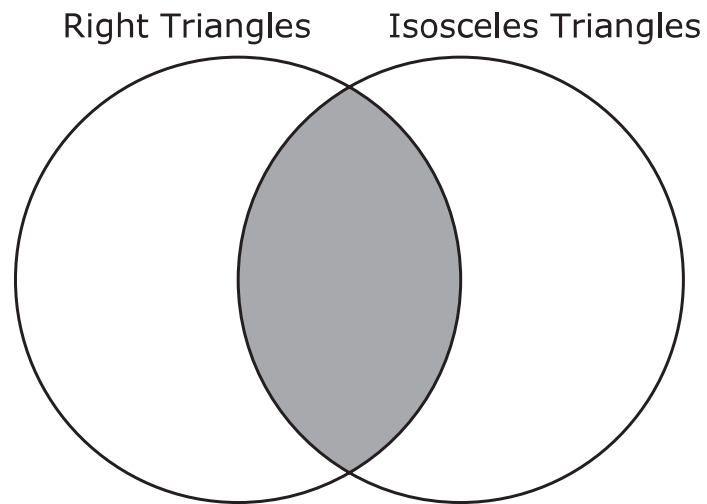
Write the correct answer in each box. Each answer may be used more than once. Not all answers will be used.

1	2	4	5	7	8	12
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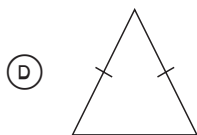
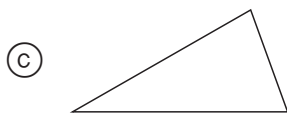
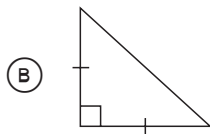
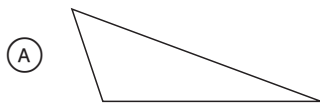
Fraction
Eaten

Fraction
Left Over

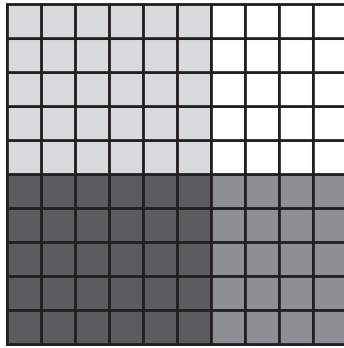
32 This Venn diagram can be used to classify triangles.



Which triangle should be placed in the shaded part of this Venn diagram?



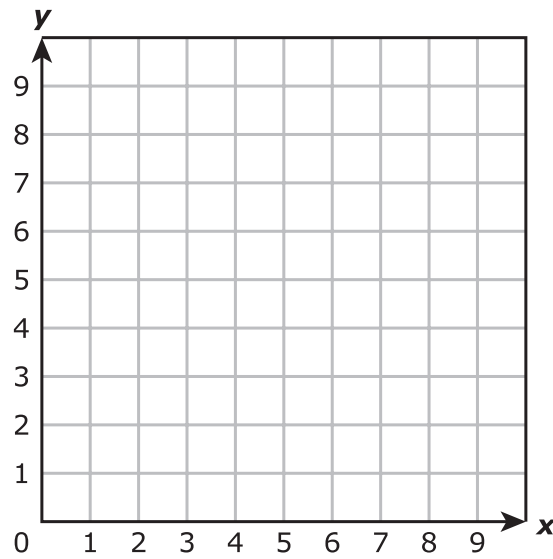
- 33** This hundredths model is shaded to represent the multiplication of two numbers.



Which equation can be represented by the shaded parts of the model?

- (A) $0.06 \times 0.05 = 0.003$
- (B) $0.06 \times 0.05 = 0.3$
- (C) $0.6 \times 0.5 = 0.3$
- (D) $0.60 \times 0.50 = 0.03$

34 A coordinate grid is shown.



Which term best describes the point where the horizontal axis intersects the vertical axis?

- (A) Quadrant
- (B) x -coordinate
- (C) y -coordinate
- (D) Origin



**STAAR
GRADE 5
Mathematics
PRACTICE**

