THE CATHOLIC ACADEMY
OF STAMFORD

June 2026

Dear Catholic Academy of Stamford Rising 7th Grade PreAlgebra Students,

Congratulations on finishing another successful year! In order to be prepared for your PreAlgebra math class, you are being asked to complete the attached math packet. *Unless you register within the last two weeks of summer, you are responsible for completing the entire packet before the new school year begins at the end of August.*

Please read the directions carefully and make sure that all parts are completed. You will be receiving a grade (in regards to completeness and accuracy) for this assignment. **Please use a pencil and show your work.** You are not allowed to use a calculator. This packet is due to Mrs. Mysogland on the first day of math class. Please note that if this math work is not submitted on time, a late penalty will be deducted from the grade.

Parents are asked to verify that their child completed this summer work by signing at the bottom of this letter.

In addition to the packet, 7th graders, you should also work on your IReady math path. The site is clever.com/in/diobpt, then click on the IReady icon. You should try to do 15 minutes a week of IReady work for the months of June and July. (The site usually shuts down in August to prepare for the new school year.)

Thank you.

Mrs. Mysogland

Parent Signature _____ Date _____

# All Operations with Integers

Use an integer strategy to find each answer.

| | | |
|---|---|---|
| $(-5) + (-4) =$ | $(-4) \times (-7) =$ | $(+6) - (-2) =$ |
| $(-3) + (+1) =$ | $(-18) \div (-6) =$ | $(-1) \times (+5) =$ |
| $(-2) \times (-7) =$ | $(+8) \times (+3) =$ | $(+9) + (-3) =$ |
| $(+3) \times (-1) =$ | $(-4) - (-1) =$ | $(+6) + (-5) =$ |
| $(-3) + (+9) =$ | $(-5) \times (+3) =$ | $(-3) \div (+3) =$ |
| $(-3) \times (+3) =$ | $(-3) + (-6) =$ | $(+8) + (-9) =$ |
| $(-5) \times (+5) =$ | $(-8) - (+6) =$ | $(-7) - (-3) =$ |
| $(+1) - (-9) =$ | $(+8) \times (+4) =$ | $(-4) + (-5) =$ |
| $(+8) - (-2) =$ | $(-9) + (-4) =$ | $(+6) \times (+3) =$ |
| $(-7) - (+2) =$ | $(+2) \times (-4) =$ | $(+3) + (-8) =$ |

# THE NUMBER SYSTEM
## QUICK CHECK

Name _____

write answers here

| | | | | |
|---|---|---|---|---|
| 1. | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 2. | Ⓕ | Ⓖ | Ⓗ | Ⓙ |
| 3. | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
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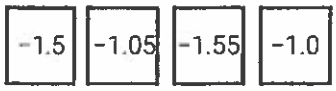
| 7. | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 8. | Ⓕ | Ⓖ | Ⓗ | Ⓙ |
| 9. | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 10. | Ⓕ | Ⓖ | Ⓗ | Ⓙ |

1. Meredith must order the cards from greatest to least. Which list is correct?



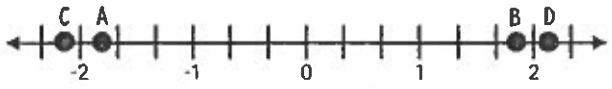

A. -1.55, -1.5, -1.05, -1.0

B. -1.0, -1.05, -1.55, -1.5

C. -1.0, -1.05, -1.5, -1.55

D. -1.5, -1.55, -1.0, -1.05

2. The following numbers are placed on a number line. Which of the following best represents point A?




F. $-2\frac{1}{8}$ G. $-1\frac{7}{8}$ H. $2\frac{1}{8}$ J. $1\frac{7}{8}$

3. The table below shows the number of miles run each day of the week. Which list shows the number of miles run in order from least to greatest?

| MONDAY | TUESDAY | WEDNESDAY | THURSDAY |
|---|---|---|---|
| $3\frac{1}{3}$ | $3\frac{2}{5}$ | $3\frac{3}{8}$ | $3\frac{1}{2}$ |

A. Monday, Thursday, Wednesday, Tuesday
B. Thursday, Tuesday, Wednesday, Monday
C. Monday, Wednesday, Tuesday, Thursday
D. Tuesday, Monday, Wednesday, Thursday

4. Jillian tracks her progress on her spelling tests over a period of four weeks. Which list shows her scores from greatest to least?

| WEEK 1 | WEEK 2 | WEEK 3 | WEEK 4 |
|---|---|---|---|
| $\frac{25}{30}$ | $\frac{11}{15}$ | 82% | 0.78 |

F. Weeks 1, 3, 2, 4

G. Weeks 3, 1, 2, 4

H. Weeks 3, 1, 4, 2

J. Weeks 1, 3, 4, 2

5. Which of the following situations does not represent the number -14?

A. The temperature drops 14°F.

B. An account is credited $14.

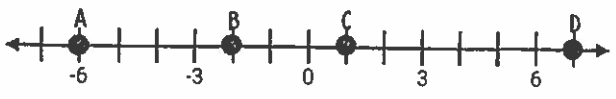
C. A football player runs for a loss of 14 yards.

D. The element Silicon has 14 electrons.

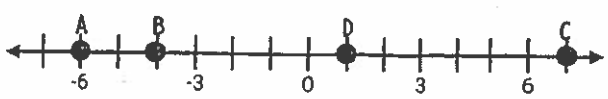
6. The following integers are placed on a number line. Which of the following best represents their location on the number line?

A. -6 | B. -4 | C. 7 | D. -1

F.

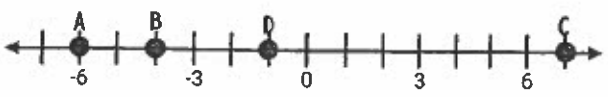



G.




H.


J.




7. Which of the following statements correctly matches its description?

A. -7 > - 9, -7 is located to the left of -9

B. -8 < -2.5, -2.5 is located to the right of -8

C. $-2\frac{2}{3} > -5$, -5 is located to the right of $-2\frac{2}{3}$

D. -10 < -9, -9 is located to the left of -10

8. Lydia owes her parents $8.50. Maria owes her parents $9.25. Which of the following inequality shows the relationship between what Lydia and Maria owe their parents?

F. -8.50 > -9.25

G. 9.25 > 8.50

H. -8.50 < -9.25

J. 9.25 < 8.50

9. The table below includes information about a number. Which of the following best represents the missing information?

| NUMBER | OPPOSITE | ABSOLUTE VALUE |
|---|---|---|
| 6 | -6 | ? |
| -4 | 4 | 4 |
| - 13 | 13 | 13 |

A. 6

B. -6

C. 0

D. -4

10. Which of the following statements best represents the expression below?

$$-|-5|$$

F. the opposite of negative five is 5

G. the absolute value of negative 5 is 5

H. the opposite of the absolute value of negative 5 is negative 5

J. the absolute value of 5 is negative 5

# RATIONAL NUMBER OPERATIONS

Name _____

## QUICK CHECK

1. Maryanne is making a friendship necklace at summer camp using 1.6 cm beads. What is a reasonable estimate for the length if she uses 24 beads?

A. 22.4 cm  B. 40 cm  C. 33.8 cm  D. 38.4 cm

2. A pitcher of iced tea holds 128 ounces. A large orange cooler holds 1,792 ounces of iced tea. How many pitchers of iced tea will it take to fill the large orange cooler?

F. 12  G. 24  H. 14  J. 18

3. On a radio morning show, every 12th caller receives concert tickets, and every 16th caller receives an autographed album. What caller number will receive both?

A. 24  B. 192  C. 48  D. 84

4. Mrs. Barker displays a math problem on the white board. Which of the following expressions is also equal to the problem on the white board?

$$\frac{3}{4} \div \frac{5}{8}$$

F. $\frac{3}{4} \cdot \frac{5}{8}$  G. $\frac{4}{3} \cdot \frac{5}{8}$  H. $\frac{3}{4} \cdot \frac{8}{5}$  J. $\frac{4}{3} \cdot \frac{8}{5}$

5. In the month of January Sarah drove her car 3,219.2 miles. That brought the car's total mileage to 65,470.5 miles. How many miles were on the car before January?

A. 68,689.7

B. 62,251.3

C. 62,269.3

D. 57,345.8

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|---|---|---|---|---|---|---|---|
| 1. | Ⓐ | Ⓑ | Ⓒ | Ⓓ | | | |
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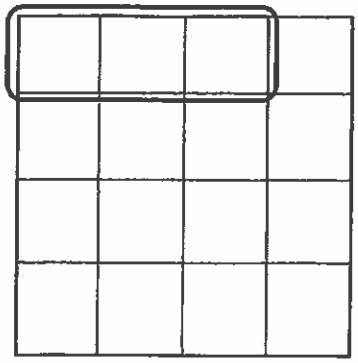
| 3. | Ⓐ | Ⓑ | Ⓒ | Ⓓ | | | |
| 4. | Ⓕ | Ⓖ | Ⓗ | Ⓙ | | | |
| 5. | Ⓐ | Ⓑ | Ⓒ | Ⓓ | | | |
| 6. | Ⓕ | Ⓖ | Ⓗ | Ⓙ | | | |
| 7. | Ⓐ | Ⓑ | Ⓒ | Ⓓ | | | |
| 8. | Ⓕ | Ⓖ | Ⓗ | Ⓙ | | | |
| 9. | Ⓐ | Ⓑ | Ⓒ | Ⓓ | | | |

10. Use the grid below.

| | | | | | . | | |
|---|---|---|---|---|---|---|---|
| ⊕ | ⓪ | ⓪ | ⓪ | ⓪ | | ⓪ | ⓪ |
| ⊖ | ① | ① | ① | ① | | ① | ① |
| | ② | ② | ② | ② | | ② | ② |
| | ③ | ③ | ③ | ③ | | ③ | ③ |
| | ④ | ④ | ④ | ④ | | ④ | ④ |
| | ⑤ | ⑤ | ⑤ | ⑤ | | ⑤ | ⑤ |
| | ⑥ | ⑥ | ⑥ | ⑥ | | ⑥ | ⑥ |
| | ⑦ | ⑦ | ⑦ | ⑦ | | ⑦ | ⑦ |
| | ⑧ | ⑧ | ⑧ | ⑧ | | ⑧ | ⑧ |
| | ⑨ | ⑨ | ⑨ | ⑨ | | ⑨ | ⑨ |

6. Which of the following equations does the model below represent?



F. $\frac{3}{4} \div 4 = \frac{3}{16}$

G. $\frac{3}{4} \div \frac{1}{4} = \frac{3}{16}$

H. $\frac{2}{3} \div 4 = \frac{8}{3}$

J. $\frac{2}{3} \div \frac{1}{4} = \frac{2}{12}$

7. A local food bank is creating Thanksgiving baskets. There are 72 cans of green beans, 96 cans of corn, and 48 cans of pumpkin. What is the greatest number of baskets that can be filled equally?

A. 9
B. 15
C. 18
D. 24

8. Amanda uses $\frac{1}{3}$ of a cup of milk each time she makes a batch of pancakes. How many batches can she make if she only has $\frac{11}{12}$ of a cup of milk left?

F. $1\frac{3}{4}$

G. $2\frac{3}{4}$

H. $2\frac{1}{3}$

J. $2\frac{1}{4}$

9. Jeremy is packaging a stew into to-go containers. There are $8\frac{3}{4}$ cups of stew that need to be put into 5 to-go containers equally. How many cups of stew will be in each container?

A. $1\frac{1}{4}$
B. $1\frac{3}{4}$
C. $1\frac{2}{3}$
D. $2\frac{1}{3}$

10. The parent teacher association is raising money for a new swing set. They need $682.56 to purchase the swing set and receive a $200.00 donation. The remaining amount will be equally divided among 8 different student groups to raise. How much money will each student group need to raise in order to purchase the swing set?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

# EXPRESSIONS
## QUICK CHECK

Name _____

1. Which expression is equivalent to 4(2x +3)?

use the distributive property

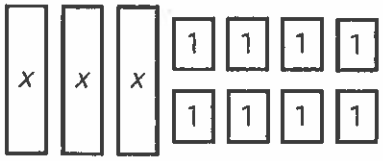
A. 4 + 2x + 4 +3 B. 8x + 12 C. 8x + 3 D. 4 + 2x + 12

2. Amanda simplifies the following expression and shows her work below. What mistake did Amanda make that resulted in an incorrect answer?

$$34 - 8 \div 2 + 3 \cdot 4$$
$$34 - 4 + 3 \cdot 4$$
$$34 - 7 \cdot 4$$
$$34 - 28$$
$$6$$

F. she added before multiplying
G. she subtracted before adding
H. she multiplied before dividing
J. she added before dividing

3. Which of the following expressions is best represented by the model below?




A. 3x + 10
B. 3x - 2
C. 3x + 6
D. 3x + 8

4. Four students write algebraic expressions and equations on their white board. Which of the students wrote expressions?

| STUDENT 1 | STUDENT 2 | STUDENT 3 | STUDENT 4 |
|---|---|---|---|
| $\frac{1}{2}x+6$ | $3x=\frac{2}{3}$ | $4-\frac{3}{4}=x$ | $5-x$ |

F. Students 1 and 4
G. Students 2 and 3
H. Students 1, 3, and 4
J. Students 2 and 4

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | . | | |
| ⊕ | ⓪ | ⓪ | ⓪ | ⓪ | | ⓪ | ⓪ |
| ⊖ | ① | ① | ① | ① | | ① | ① |
| | ② | ② | ② | ② | | ② | ② |
| | ③ | ③ | ③ | ③ | | ③ | ③ |
| | ④ | ④ | ④ | ④ | | ④ | ④ |
| | ⑤ | ⑤ | ⑤ | ⑤ | | ⑤ | ⑤ |
| | ⑥ | ⑥ | ⑥ | ⑥ | | ⑥ | ⑥ |
| | ⑦ | ⑦ | ⑦ | ⑦ | | ⑦ | ⑦ |
| | ⑧ | ⑧ | ⑧ | ⑧ | | ⑧ | ⑧ |
| | ⑨ | ⑨ | ⑨ | ⑨ | | ⑨ | ⑨ |

1. Ⓐ Ⓑ Ⓒ Ⓓ
2. Ⓕ Ⓖ Ⓗ Ⓙ
3. Ⓐ Ⓑ Ⓒ Ⓓ
4. Ⓕ Ⓖ Ⓗ Ⓙ
5. Ⓐ Ⓑ Ⓒ Ⓓ
6. Ⓕ Ⓖ Ⓗ Ⓙ
7. Ⓐ Ⓑ Ⓒ Ⓓ
8. Ⓕ Ⓖ Ⓗ Ⓙ
9. Ⓐ Ⓑ Ⓒ Ⓓ
10. Use the grid below.

5. Which two expressions are equivalent?

A. $4(2 + x)$
$4 \cdot 2 + 2 \cdot x$

B. $4 + 2 + x$
$(4 + 2) + x$

C. $4 \cdot x + 2$
$4 \cdot (x + 2)$

D. $4 \div (2 - x)$
$4 - 2 \div x$

6. Sara and her friends go to a football game and get snacks from the concessions. She uses various pictures to show what they ordered. Which of the following expressions best represents their order?

F. $4d + h + 2f$

G. $4d + 2h + 2f$

H. $h + 2f + 5d$

J. $2h + 4f + 3d$

7. Which of the following best represents a term in the expression below?

$$6x + 5^3 - 7y + 20$$

A. 7

B. 6

C. $5^3$

D. y

8. The expression below is evaluated when $x = 9$, $y = 3$, and $z = 2$. What is the value of the expression?

$$8x - z^2 + 2y$$

plug in values for variables

F. 38

G. 16

H. 72

J. 74

9. Which of the set of expressions is equivalent?

A. $3(2x + 5)$ and $6x + 5$

B. $2(3x + 5)$ and $6x + 15$

C. $3(2x + 5)$ and $6x + 10$

D. $2(3x + 5)$ and $6x + 10$

10. Determine the value of the expression below.

$$9 + 3(10 \div 2) + 5^2$$

PEMDAS

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

# RATIOS & PROPORTIONALITY
## QUICK CHECK

Name _____

1. A bike travels 24 miles in 3 hours. At this rate how many miles will the bike travel in 10 hours?

   A. 192
   B. 80
   C. 32
   D. 124

2. Edgar pays $67.86 for 7.8 pounds of fertilizer. What is the price per pound of fertilizer?

   F. $6.98
   G. $5.65
   H. $8.70
   J. $10.26

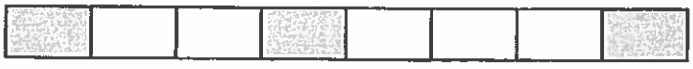
3. Diana uses 30 grams of coffee beans to make 48 fluid ounces of coffee. When company comes she makes 96 fluid ounces of coffee. How many grams of coffee beans does Diana use when company comes?

   A. 160  B. 60  C. 98.2  D. 14.4

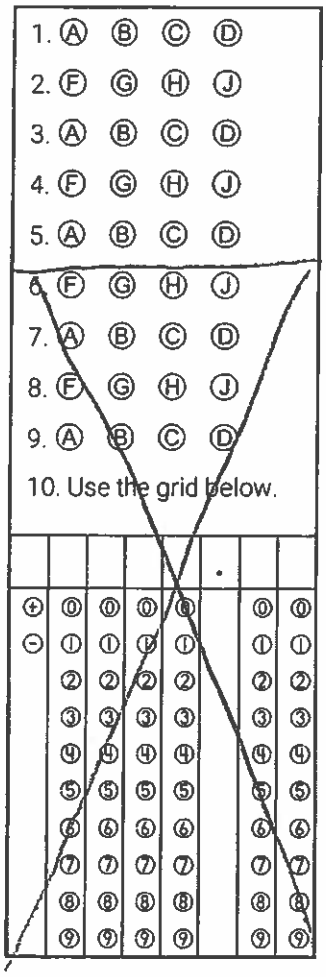
4. Sarah Beth babysits and earns $10.50 per hour. Which of the following best represents the relationship between the number of hours, *h*, and the total earnings, *t*.

   F. $t = 10.50 + h$
   G. $t = 10.50h$
   H. $h = 10.50 + t$
   J. $h = 10.50t$

5. The model below shows the ratio of gray to white squares. Which of the following is not an equivalent ratio of gray squares to total squares?



   A. 9/24
   B. 21/60
   C. 15/40
   D. 27/72






only # 1-5

# PERCENTS
## QUICK CHECK

Name _____

1. There are 200 end-of-the-year school dance tickets available. Students who have perfect attendance are able to purchase them in advance. If 18 tickets were purchased in advance, then what percent of the tickets were purchased in advance?

A. 18%
B. 22%
C. 9%
D. 14%

(hint $\frac{18}{200}$)

2. A survey shows that 85% of students carry a backpack to school. If there are 320 students in the school, then how many students carry a backpack?

F. 302
G. 220
H. 190
J. 272

(hint .85 x 320)

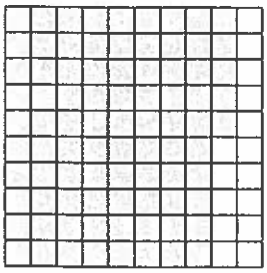
3. A flock of sheep has 182 white sheep and 98 spotted sheep. Which proportion can be used to determine *p*, the percent of the flock that has spots?

A. $\frac{p}{100}=\frac{98}{182}$ B. $\frac{p}{100}=\frac{182}{280}$ C. $\frac{280}{182}=\frac{98}{p}$ D. $\frac{98}{280}=\frac{p}{100}$

4. Eighty percent is best represented by which the following fractions?

F. $\frac{8}{100}$ G. $\frac{4}{5}$
H. $\frac{3}{4}$ J. $\frac{8}{20}$

5. What number does the model below best represent?



A. 17/20 C. 0.80
B. 75% D. 16/20

| | | | | | | | |
|---|---|---|---|---|---|---|---|
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| 2. Ⓕ | Ⓖ | Ⓗ | Ⓙ | | | | |
| 3. Ⓐ | Ⓑ | Ⓒ | Ⓓ | | | | |
| 4. Ⓕ | Ⓖ | Ⓗ | Ⓙ | | | | |
| 5. Ⓐ | Ⓑ | Ⓒ | Ⓓ | | | | |
| 6. Ⓕ | Ⓖ | Ⓗ | Ⓙ | | | | |
| 7. Ⓐ | Ⓑ | Ⓒ | Ⓓ | | | | |
| 8. Ⓕ | Ⓖ | Ⓗ | Ⓙ | | | | |
| 9. Ⓐ | Ⓑ | Ⓒ | Ⓓ | | | | |
| 10. Use the grid below. | | | | | | | |
| | | | | | . | | |
| ⊕ | ⓪ | ⓪ | ⓪ | ⓪ | | ⓪ | ⓪ |
| ⊖ | ① | ① | ① | ① | | ① | ① |
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| | ③ | ③ | ③ | ③ | | ③ | ③ |
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| | ⑥ | ⑥ | ⑥ | ⑥ | | ⑥ | ⑥ |
| | ⑦ | ⑦ | ⑦ | ⑦ | | ⑦ | ⑦ |
| | ⑧ | ⑧ | ⑧ | ⑧ | | ⑧ | ⑧ |
| | ⑨ | ⑨ | ⑨ | ⑨ | | ⑨ | ⑨ |

6. Mr. Dorado has completed 75% of his morning run. Which of the following sets does not represent 75%?

F. $\frac{3}{4}$, 0.75 G. 75, $\frac{15}{20}$ H. 7.5, $\frac{9}{12}$ J. $\frac{75}{100}$, $\frac{9}{12}$

7. If the shaded strip diagram represents 100%, then which strip diagram represents 150%?

A. 

B. 

C. 

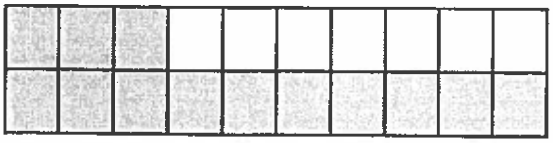
D. 

8. On a spelling test, Marcy got 15% of the questions incorrect. If there were 40 questions on the spelling test, then how many questions did Marcy get correct?

( hint $\frac{15}{100}$ $\frac{x}{40}$ )

F. 6 G. 12 H. 15 J. 34

9. The shaded area below represents the pieces of tile installed in a hallway. What percent of the hallway has not been installed with tile?



A. 65%

B. 35%

C. 66.6%

D. 33.3%

10. Paula earned a 56% on her science test. If she got 14 problems correct, then how many questions were on the test?

# THE COORDINATE PLANE
## QUICK CHECK

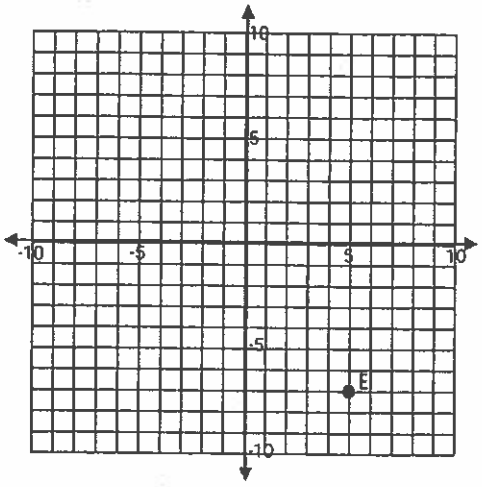
Name _____

1. The ordered pair (-7, 9) can be found in which quadrant?

A. Quadrant I  B. Quadrant II  C. Quadrant III  D. Quadrant IV

| | | | | |
|---|---|---|---|---|
| 1. | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 2. | Ⓕ | Ⓖ | Ⓗ | Ⓙ |
| 3. | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 4. | Ⓕ | Ⓖ | Ⓗ | Ⓙ |
| 5. | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 6. | Ⓕ | Ⓖ | Ⓗ | Ⓙ |
| 7. | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 8. | Ⓕ | Ⓖ | Ⓗ | Ⓙ |
| 9. | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 10. | Ⓕ | Ⓖ | Ⓗ | Ⓙ |

2. Point E is reflected across the y-axis. Which ordered pair best represents E'?




F. (5, -7)

G. (-7, 5)

H. (-5, -7)

J. (5, 7)

3. Jeremy plots the points (4, 3) and (4, -6) on the coordinate plane. Which of the following statements best describes the points he plotted?

A. the points form a vertical line segment that measures 9 units
B. the points form a horizontal line segment that measures 7 units
C. the points form a vertical line segment that measures 7 units
D. the points form a horizontal line segment that measures 9 units

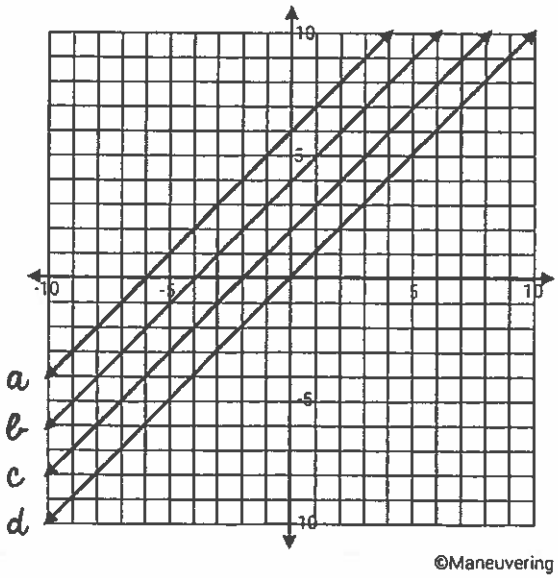
4. Which line contains the ordered pair (-2, 4)?

F. line A

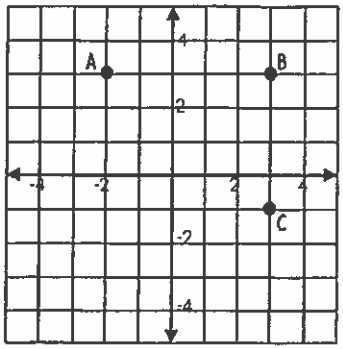
G. line B

H. line C

J. line D

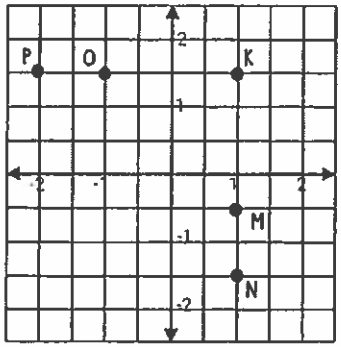


5. The points on the coordinate plane are three vertices of rectangle ABCD. What is the ordered pair of D?



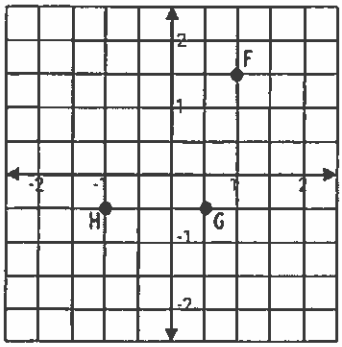

A. (-2, 1) B. (-1, 2) C. (1, -2) D. (-2, -1)

6. Point K is reflected across the x-axis. Which of the following points best represents K'?




F. point M G. point N H. point O J. point P

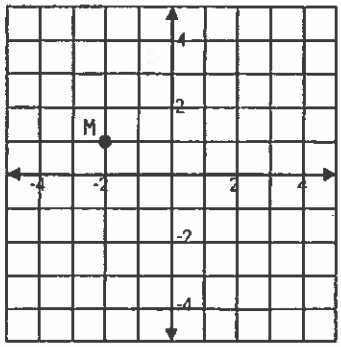
7. Three points form a triangle and are graphed on the coordinate plane. Which of the ordered pairs below represents a point on the triangle?




A. (-1, -0.5) B. (2, 3)

C. (1, -1.5) D. (-1, -1)

8. Marsha's house is located on the coordinate plane below. Tasha's house is located 6 units from Marsha's house. Which of the following could represent the location of Tasha's house?




F. (-2, 5) G. (4, 2)

H. (2, 5) J. (-2, -5)

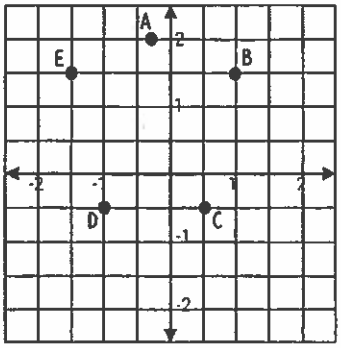
9. The table below includes information about the vertices of a triangle. Which of the following best represents the missing information?

| VERTEX | REFLECTED ACROSS X-AXIS | REFLECTED ACROSS Y-AXIS |
|---|---|---|
| (0, 0) | (0, 0) | (0, 0) |
| (4, 5) | (4, -5) | (-4, 5) |
| (3, -2) | ? | (-3, -2) |

A. (3, 2) B. (3, -2)

C. (-3, 2) D. (-3, -2)

10. Points A, B, C, D, and E form a pentagon. Which of the following ordered pairs can be located inside the pentagon?



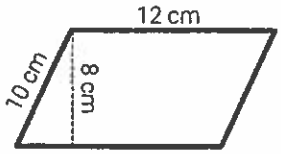

F. (-1, -1) G. (1, -1)

H. (1, 2) J. (-0.5, 1)

# GEOMETRY AND MEASUREMENT
## QUICK CHECK

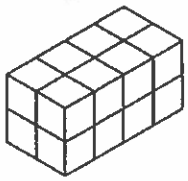
Name _____

1. A parallelogram is shown below. Which equation best represents the formula for the area of the parallelogram?



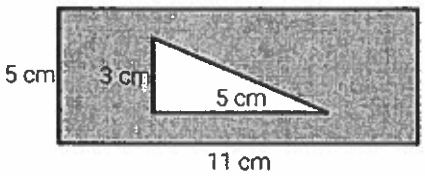

A. $A = \frac{1}{2}(8+12)\cdot 10$ B. $A = \frac{1}{2}(10+12)\cdot 8$ C. $A = 12\cdot 8$ D. $A = 12\cdot 10$

2. The rectangular prism below is filled with cubic units. Each unit measures $\frac{1}{3}in^3$. How many unit cubes does it take to fill the rectangular prism?



F. 32 G. 16 H. 8 J. 4

3. A triangle is inscribed in a rectangle, as shown below. What is the area of the shaded region?

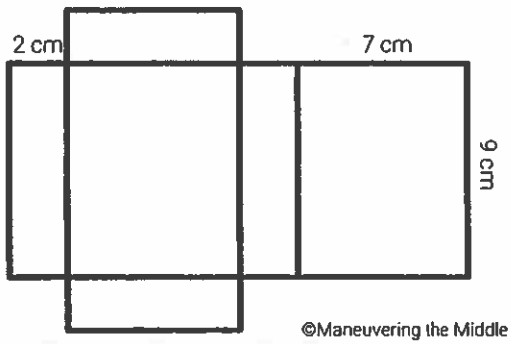



A. 40 $cm^2$ C. 47.5 $cm^2$

B. 62.5 $cm^2$ D. 22.75 $cm^2$

4. The dimensions of the rectangular prism are shown on the net below. Which of the following is closest to the total surface area of the figure?

( hint find areas of 6 separate rectangles )



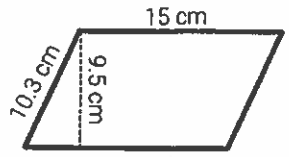

F. 85 $cm^2$ G. 126 $cm^2$

H. 63 $cm^2$ J. 190 $cm^2$

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1. Ⓐ | Ⓑ | Ⓒ | Ⓓ | | | | |
| 2. Ⓕ | Ⓖ | Ⓗ | Ⓙ | | | | |
| 3. Ⓐ | Ⓑ | Ⓒ | Ⓓ | | | | |
| 4. Ⓕ | Ⓖ | Ⓗ | Ⓙ | | | | |
| 5. Ⓐ | Ⓑ | Ⓒ | Ⓓ | | | | |
| 6. Ⓕ | Ⓖ | Ⓗ | Ⓙ | | | | |
| 7. Ⓐ | Ⓑ | Ⓒ | Ⓓ | | | | |
| 8. Ⓕ | Ⓖ | Ⓗ | Ⓙ | | | | |
| 9. Ⓐ | Ⓑ | Ⓒ | Ⓓ | | | | |
| 10. Use the grid below. | | | | | | | |

| | | | | | . | | |
|---|---|---|---|---|---|---|---|
| ⊕ | ⓪ | ⓪ | ⓪ | ⓪ | | ⓪ | ⓪ |
| ⊖ | ① | ① | ① | ① | | ① | ① |
| | ② | ② | ② | ② | | ② | ② |
| | ③ | ③ | ③ | ③ | | ③ | ③ |
| | ④ | ④ | ④ | ④ | | ④ | ④ |
| | ⑤ | ⑤ | ⑤ | ⑤ | | ⑤ | ⑤ |
| | ⑥ | ⑥ | ⑥ | ⑥ | | ⑥ | ⑥ |
| | ⑦ | ⑦ | ⑦ | ⑦ | | ⑦ | ⑦ |
| | ⑧ | ⑧ | ⑧ | ⑧ | | ⑧ | ⑧ |
| | ⑨ | ⑨ | ⑨ | ⑨ | | ⑨ | ⑨ |

5. What is the area of the figure below?



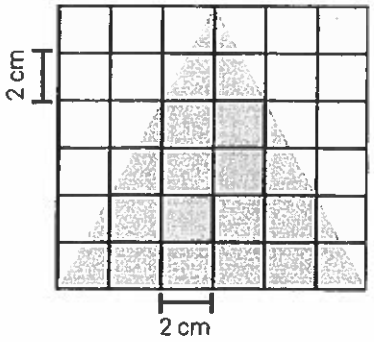

A. 142.5 $cm^2$

B. 154.5 $cm^2$

C. 97.85 $cm^2$

D. 210 $cm^2$

6. A puzzle is shown below. Which of the following is the closest to the area of the shaded portions of the puzzle?




F. 18 $cm^2$

G. 36 $cm^2$

H. 72 $cm^2$

J. 144 $cm^2$

7. A clothing trunk measures 2.5 feet wide by 1.5 feet high by 4 feet long. What is the volume of the clothing trunk?

(hint $V = L \times W \times H$)

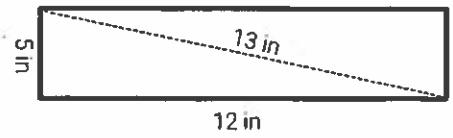
A. 1,500 $ft^3$

B. 15 $ft^3$

C. 60 $ft^3$

D. 150 $ft^3$

8. The rectangle below is cut along the dotted line to form a triangle. Which equation best represents the area of the triangle?




F. 78 $in^2$

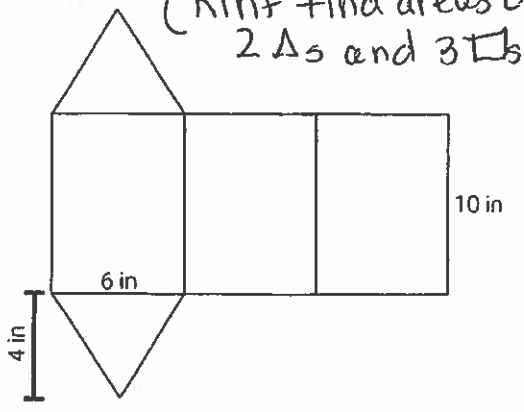
G. 90 $in^2$

H. 60 $in^2$

J. 30 $in^2$

9. What is the total surface area of the triangular prism below?

(hint find areas of 2 $\triangle$s and 3 $\square$s)




A. 204 $in^2$

B. 180 $in^2$

C. 240 $in^2$

D. 276 $in^2$

10. A sketch of a lamp is shown below. What is the area of the lamp shade in the sketch?

(hint trapezoid)