

June 2024

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 participation grade (in regards to completeness and accuracy) for this assignment. Please use a pencil and show your work. This packet is due to Mrs. Mysogland on the first day of math class.

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

Please note that if this math work is not submitted on time, a late penalty will be deducted from the grade.

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) =

$$(-3) + (+1) =$$

$$(-18) \div (-6) =$$

$$(-1) \times (+5) =$$

$$(-2) \times (-7) =$$

$$(+8) \times (+3) =$$

$$(+9) + (-3) =$$

$$(+3) \times (-1) =$$

$$(+6) + (-5) =$$

$$(-3) + (+9) =$$

$$(-5) \times (+3) =$$

$$(-3) \div (+3) =$$

$$(-3) \times (+3) =$$

$$(-3) + (-6) =$$

$$(+8) + (-9) =$$

$$(-5) \times (+5) =$$

$$(-8) - (+6) =$$

$$(+8) \times (+4) =$$

$$(-4) + (-5) =$$

$$(-9) + (-4) =$$

$$(+6) \times (+3) =$$

$$(-7) - (+2) =$$

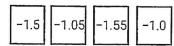
$$(+2) \times (-4) =$$

$$(+3) + (-8) =$$

THE NUMBER SYSTEM QUICK CHECK



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



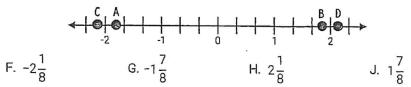
A. -1.55, -1.5, -1.05, -1.0

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?



Write answers here

- 1. A B C D
- 2. F G H J
- 4. F G A J
- 3. O O O O
- 7000

- 10. (F) (G) (H) (J)

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 1/3	3 2/5	3 3	3 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 I	WEEK 2	WEEK 3	WEEK 4
25	П	Dan	2.70
30	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.

RATIONAL NUMBER OPERATIONS QUICK CHECK

Name

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?

1. (A) $^{\odot}$ 0

G

G

5. A B C

6. F G H J

(G) (H) (J)

9. A B C D

10. Use the grid below.

0 0

(1) 1

2 2

3

(P) (P)

6 6

7 7

® 8

3

(5) (5)

9 9

3

(8)

3

(4) (9)

(5) (5)

6 6

Ø 0

(8)

9

A. 22.4 cm

B. 40 cm

C. 33.8 cm

2. A pitcher of iced tea holds 128 ounces. A large orange cooler holds 1,792 ounces

D. 38.4 cm

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?

of iced tea. How many pitchers of iced tea will it take to fill the large orange cooler?



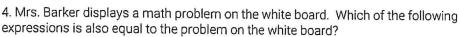
3 3

A. 24

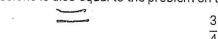
B. 192

C. 48

D. 84





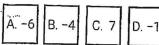


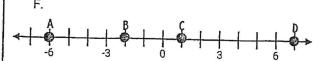
$$\frac{3}{4} \div \frac{5}{8}$$

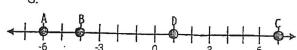
5. In the month of January Sarah drove her car 3,219.2 miles. That brought the car's total mileage to 65,470.5 miles. How many miles were on the car before January?

- A. 68,689.7
- B. 62,251.3
- C. 62,269.3
- D. 57,345.8

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











- 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?

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?

- 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

EXPRESSIONS QUICK CHECK

Name	

1. A B C D

B

(G)

B

 \bigcirc \bigcirc \bigcirc \bigcirc

(G) (H) (J)

9. A B C D

0 0 0

0

2 2

⑤ ⑤ ⑤

0 0

0 0

8 8

0

0

0

2

3 3 3 3

(P) (P) (P) (P)

(5)

6 6 6 6

® ®

9 9 9

Ö

10. Use the grid below.

(1)

2

0

0

0 0

2 2

3 3

(P)

⑤

6 6

0 0

8 8

9

2. F

3. (A) 4. (F)

6. (F)

8. 🖲

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?

$$34 - 8 \div 2 + 3 \cdot 4$$

$$34 - 4 + 3 \cdot 4$$

$$34 - 7 \cdot 4$$

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?

			1	1	1	1
X	X	X	1	1	1	1

A. 3x + 10

C. 3x + 6

B. 3x-2

D. 3x + 8

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



STUDENT I

 $\frac{1}{2}x+6$

STUDENT 2

 $3x = \frac{2}{3}$

STUDENT 3

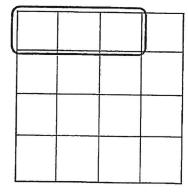
 $4 - \frac{3}{4} = x$

STUDENT 4

5 – x

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

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?





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

RATIOS & PROPORTIONALITY

Name _____

1. A B C D 2. F G H J

3. A B C D

4. F G H J

5. A B C D

©

9. A

 Θ \Box

B © DG H J

0

10. Use the grid below.

QUICK CHECK

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

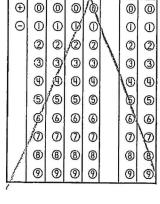
- A. 192
- B. 80
- C. 32
- D. 124

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

- 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 .



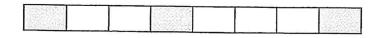
F.
$$t = 10.50 + h$$

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

@Maneuvering the Middle LLC, 2017

^{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?

5. Which two	expressions	are equiva	lent?
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- A. 4(2+x) $4 \cdot 2 + 2 \cdot x$
- B. 4+2+x(4+2)+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?



- C. $4 \cdot x + 2$ $4 \cdot (x + 2)$
- D. $4 \div (2 x)$ $4 - 2 \div x$
- F. 4d + h + 2f
- G. 4d + 2h + 2f
- H. h + 2f + 5d
- J. 2h + 4f + 3d

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

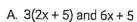
8. The expression below is evaluated when x = 9, y = 3, and z = 2. What is the value of the expression?

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

Plug in values for variables

- A. 7
- B. 6
- C. 53
- D. y

- F. 38
- G. 16
- H. 72
- J. 74



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.

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

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

PERCENTS QUICK CHECK

Name	

1. A B C D

G H

G H

©

7. A B C D

9. A B C D

2 2

(4) 4

3 3 3 3

(5) (5) (5) (5)

6 6 6

7 7 7 0

(8) (8) 8

9 9 9

10. Use the grid below.

2 2

(8)

9 **(P)** 0

① (1)

2 2

3 3

(P) **(P)**

(5) (5)

6 6

0 7

(8)

9

8

(])

2. **(F)**

4. (F)

6. F

8. E

(D) 0 0 0 0

Θ 0 1 0 0

5. A B

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?

B. 22%

C. 9%

D. 14%

hint	18	1
	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.
$$\frac{280}{182} = \frac{98}{D}$$

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?

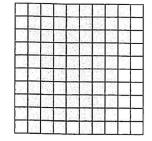
F.
$$\frac{8}{100}$$

H.
$$\frac{3}{4}$$

G.
$$\frac{4}{5}$$

J.
$$\frac{8}{20}$$

5. What number does the model below best represent?



THE COORDINATE PLANE QUICK CHECK

Name _____

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

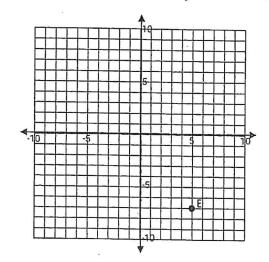
A. Quadrant I

B. Quadrant II

C. Quadrant III

D. Quadrant IV

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

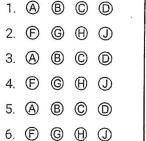


F. (5, -7)

G. (-7, 5)

H. (-5, -7)

J. (5, 7)



7. A B C D

8. (F) (G) (H) (J)

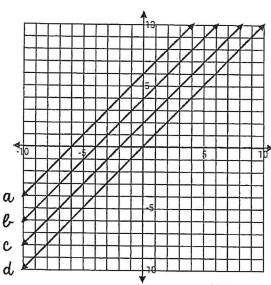
9. A B C D

10. (F) (G) (H) (J)

- 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)?



J. line D



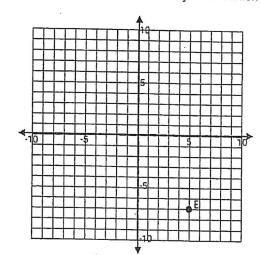
THE COORDINATE PLANE QUICK CHECK

Name _____

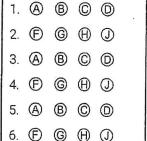
1. The ordered pair (-7, 9) can be found in which quadrant?

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

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)



- 7. A B C D
- 8. F G H ()
- 9. A B C D
- 10. (F) (G) (H) (J)

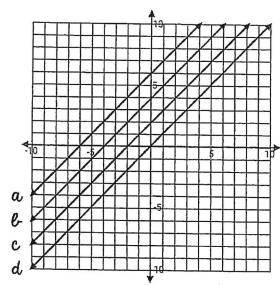
3. Jeremy plots the points (4,3) and (4,-6) on the coordinate plane. Which of the following statements best describes the points he plotted?

- 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

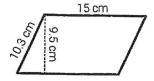
4. Which line contains the ordered pair (-2, 4)?



- G. line B
- H. line C
- J. line D

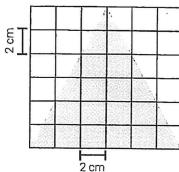


5. What is the area of the figure below?



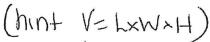
- A. 142.5 cm²
- B. 154.5 cm²
- C. 97.85 cm²
- D. 210 cm²

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

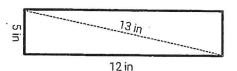


- F. 18 cm²
- G. 36 cm²
- H. 72 cm²
- J. 144 cm²

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?

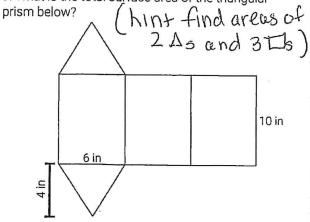


8. The rectangle below is cut along the dotted line to form a triangle. Which equation best represents the area of the triangle?



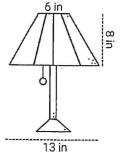
- A. 1,500 ft³
- B. 15 ft³
- C. 60 ft³
- D. 150 ft³

- F. 78 in²
- G. 90 in²
- H. 60 in²
- J. 30 in²
- 9. What is the total surface area of the triangular



- A. 204 in²
- B. 180 in²
- C. 240 in²
- D. 276 in²

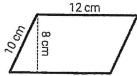
10. A sketch of a lamp is shown below. What is the area of the lamp shade in the sketch?



GEOMETRY AND MEASUREMENT QUICK CHECK

Name_

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

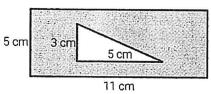


- A. $A = \frac{1}{2}(8+12)\cdot 10$ B. $A = \frac{1}{2}(10+12)\cdot 8$ C. $A = 12\cdot 8$

- 2. The rectangular prism below is filled with cubic units. Each unit measures $\frac{1}{3}$ in³. 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?

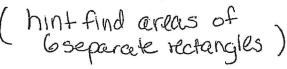


A. 40 cm²

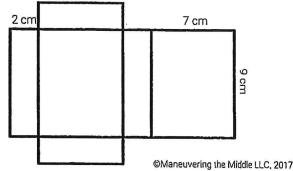
C. 47.5 cm²

B. 62.5 cm²

- D. 22.75 cm²
- 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?



- F. 85 cm²
- G. 126 cm²
- H. 63 cm²
- J. 190 cm²



- 1. A B C D
- 2. E Θ Θ

- 5. (A)
- 6. (F) (G) (H) (J)
- 7. A
- 9. A B C D
- 10. Use the grid below.

	_				 	
\oplus	0	0	0	0	0	0
Θ	0	0	0	0	①	0
	2	2	2	2	2	2
	3	3	3	3	3	3
	(4)	(4)	(4)	9	(P)	(P)
	(5)	(5)	(5)	(5)	(5)	(5)
	(6)	6	6	6	©	6
	7	7	0	0	0	7
	8	8	8	(8)	8	8
	9	9	9	9	9	9