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Santa Fe ISD

Semester 1 REVIEW

6th Grade Math 2019

1. Marian bought a new football helmet for \$72.00. He received a discount of 25% off the original price. (6.4G)

What fraction or decimal is NOT equivalent to 25%?

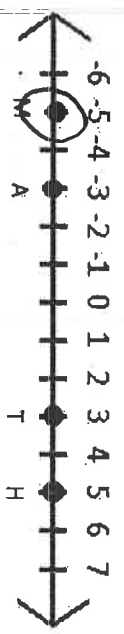
- A. $\frac{1}{4}$
 B. $\frac{5}{20}$
 C. 0.25
 D. 0.025

$$\frac{25}{100} \div \frac{25}{100} = \frac{1}{4}$$

↓
 0.25

2. Which point on the number line below matches both statements below? (6.2B)

"My opposite is 5."
 "My absolute value is 5."



- A. Point M
 B. Point A
 C. Point T
 D. Point H

$$\text{opp. of } -5 = 5$$

$$|-5| = 5$$

3. Which set of rational numbers is ordered from least to greatest? (6.2D)

- A. $\{-\frac{1}{2}, -\frac{3}{5}, 0.7, \frac{3}{5}\}$
 B. $\{-\frac{1}{4}, \frac{3}{10}, -0.5, 40\%\}$
 C. $\{-\frac{1}{3}, 75\%, \frac{2}{3}, \frac{5}{6}\}$
 D. $\{-0.25, -0.1, 25\%, \frac{1}{2}\}$

Handwritten conversions for option A:
 $-\frac{1}{2} = -0.5$
 $-\frac{3}{5} = -0.6$
 $0.7 = 0.7$
 $\frac{3}{5} = 0.6$

Handwritten conversions for option B:
 $-\frac{1}{4} = -0.25$
 $\frac{3}{10} = 0.3$
 $-0.5 = -0.5$
 $40\% = 0.4$

Handwritten conversions for option C:
 $-\frac{1}{3} \approx -0.33$
 $75\% = 0.75$
 $\frac{2}{3} \approx 0.67$
 $\frac{5}{6} \approx 0.83$

Handwritten conversions for option D:
 $-0.25 = -0.25$
 $-0.1 = -0.1$
 $25\% = 0.25$
 $\frac{1}{2} = 0.5$

4. Which expression is equivalent to $\frac{3}{4} \div \frac{7}{8}$? (6.3E)
- Keep Flip change

- A. $\frac{3}{4} \div \frac{8}{7}$
 B. $\frac{8}{7} \div \frac{3}{4}$
 C. $\frac{3}{4} \times \frac{7}{8}$
 D. $\frac{3}{4} \times \frac{8}{7}$

$$\frac{3}{4} \times \frac{8}{7}$$

9. What is the value of the following expression? (6.7 A)

$$-80 \div 10 - (-5) + 1$$

$$\begin{array}{l} P \\ -8 + 5 + 1 \\ -2 \end{array} \begin{array}{l} e \\ \rightarrow MD \\ \rightarrow AS \end{array}$$

- A. 12
B. -5
C. -2
D. 20

10. If the ratio of the number of small dogs to large dogs at the animal shelter is 9 to 5, which of the following is the possible number of small dogs and large dogs at the animal shelter? (6.4B)

$$\begin{array}{l} \text{Small : Large} \\ 9 : 5 \\ x^2 \quad x^2 \\ 18 : 10 \end{array}$$

- A. 10 small dogs, 18 large dogs
B. 18 small dogs, 10 large dogs
C. 15 small dogs, 32 large dogs
D. 32 small dogs, 15 large dogs

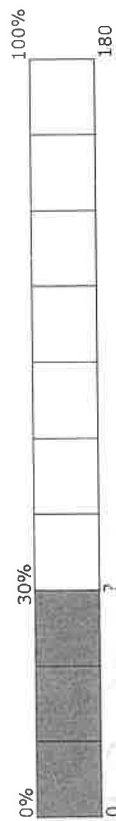
11. Which expression has a value greater than $\frac{3}{4}$? (6.3B)

$$\begin{array}{l} A. \frac{3}{4} \times \frac{2}{3} = \frac{6}{12} = \frac{1}{2} = 0.5 \\ B. \frac{3}{4} \times \frac{3}{2} = \frac{9}{8} = 1.125 \\ C. \frac{3}{4} \times \frac{1}{2} = \frac{3}{8} = 0.375 \\ D. \frac{3}{4} \times \frac{7}{8} = \frac{21}{32} = 0.656 \end{array}$$

12. On the last school spirit day, 5 out of every 7 students wore school colors. Based on this information, if 560 students attended school, which proportion can be used to determine how many of these students will wear school colors on the next spirit day? (6.4B)

- A. $\frac{5}{7} = \frac{560}{x}$
B. $\frac{5}{12} = \frac{x}{560}$
C. $\frac{5}{7} = \frac{x}{560}$
D. $\frac{7}{5} = \frac{x}{560}$

13. There were 180 people in a movie theater. 30% of them received a student discount. How many people received the student discount? (6.5B)



- A. 70
B. 150
C. 30
D. 54

$$30\% \text{ of } 180$$



$$0.3 \times 180 = 54$$

5. Joey's mom bought $1\frac{3}{4}$ pounds of ground meat at the butcher shop and separated the meat into $\frac{1}{4}$ pound bags. How many bags will she be able to make? (6.3E)

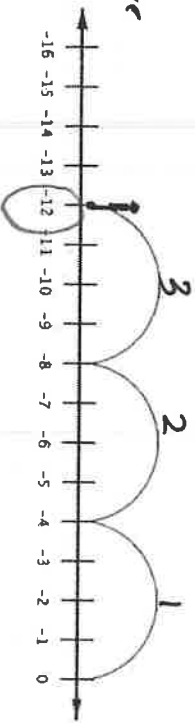
- A. 7 bags
B. 5 bags
C. 10 bags
D. 2 bags

Division
 $1\frac{3}{4} \div \frac{1}{4} = \frac{7}{4}$

$\frac{7}{4} \div \frac{1}{4} = 7 \text{ bags}$

6. Which multiplication equation best describes the number line? (6.3D)

negative



- A. $4 \times 3 = 12$
B. $-3 \times 4 = 12$
C. $-4 \times 3 = -12$
D. $-1 \times 12 = -12$

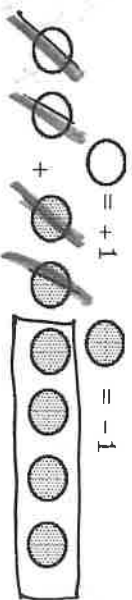
3 groups of -4's

7. Morty has a piece of wood that is 22.4 ft long. He cuts the wood into pieces that are 5.6 ft long. How many pieces of wood does Morty have? (6.3E)

- A. 6
B. 4
C. 20
D. 9

$22.4 \text{ ft} \div 5.6 \text{ ft} = 4$

8. Rachel created the model below to find the sum of 2 and -6.



Which sum is represented by the model? (6.3D)

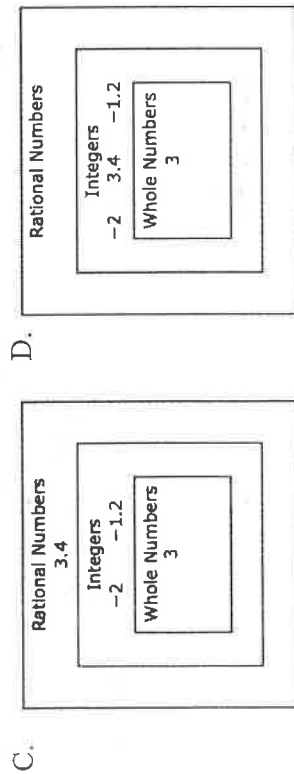
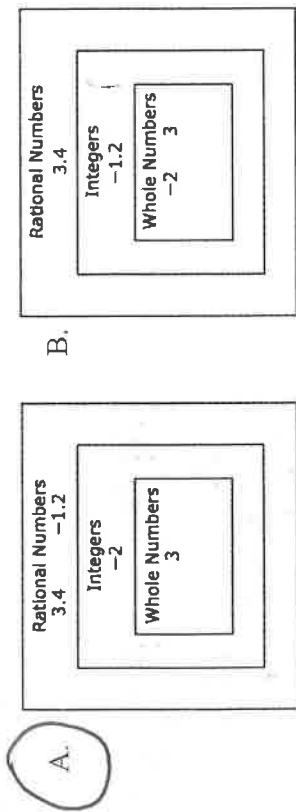
- A. 4
B. 8
C. -8
D. -4

cops & robbers

18. Which graphic correctly groups the following numbers?

(6.2A)

3.4 -2 3 -1.2



19. Which of the following is NOT equivalent to $\frac{6}{4}$? (6.2E)

- A. $4 \div 6$
- B. $\frac{3}{2}$
- C. $6 \div 4$
- D. $4 \overline{)6}$

$$\frac{6}{4} = 4 \overline{)6} = 6 \div 4$$

$$\frac{6}{4} = \frac{3}{2}$$

20. Alyssa will correctly label the numbers 48.4 , $48\frac{1}{2}$, 48.09 , $48\frac{3}{5}$ on the number line below. (6.2C)



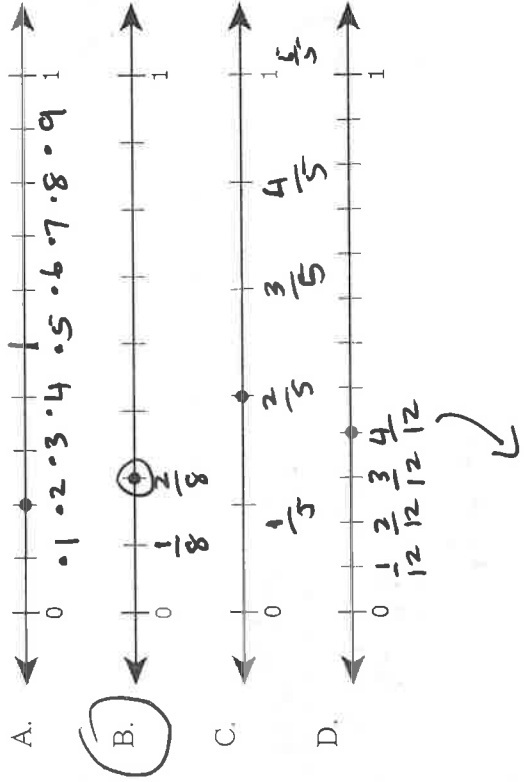
Which number will be closer to 49?

- A. 48.4
- B. $48\frac{1}{2}$
- C. 48.09
- D. $48\frac{3}{5}$

$$5 \overline{)0.6} = 0.6$$

$$48.6$$

21. An engine is operating at 25% of its full power. Which number line shows a point that represents 25%? (6.4F)



$$\frac{2}{8} = \frac{1}{4} = 25\%$$

14. Which expression is represented on the number line? (6.3C)



- A. $0 - (-8)$
☒ B. $-2 \cdot 4$
 C. $-2 + (-8)$
 D. $-2 \div 4$

4 groups of

-2's

15. Mandy asked 50 students in her school which fruit they prefer. The table below shows the results of her survey. (6.4G)

Fruit Survey	
Type of Fruit	Number of Students
Apples	13
Bananas	25
Oranges	12

Which decimal represents the fraction of the students who prefer oranges?

- A. .12
☒ B. .24
 C. .60
 D. .75

0.24

$$\frac{12}{50} \times \frac{2}{2} = \frac{24}{100}$$

16. Customers at an ice-cream shop took a survey. The results showed that 144 customers rated the shop as being "very satisfactory". This number represents 45% of the total number of customers who took the survey. (6.5B)

What was the total number of customers who took the survey?

- A. 189
 B. 65
 C. 99
☒ D. 320

$$\frac{144}{45\%} = \frac{144}{\frac{45}{100}} = \frac{144 \times 100}{45} = 320$$

$$\frac{144}{45} = \frac{450}{100} \div 5$$

$$\frac{144}{45} \times \frac{100}{45} = \frac{14400}{2025} = 7.06$$

$$320 \times 16 = 5120$$

17. Which list shows the temperatures in order from coldest to warmest in degrees Fahrenheit? (6.2D)

Largest

- A. $-10^{\circ}\text{F}, 8^{\circ}\text{F}, -5^{\circ}\text{F}, 0^{\circ}\text{F}$
 B. $-5^{\circ}\text{F}, -10^{\circ}\text{F}, 0^{\circ}\text{F}, 8^{\circ}\text{F}$
☒ C. $-10^{\circ}\text{F}, -5^{\circ}\text{F}, 0^{\circ}\text{F}, 8^{\circ}\text{F}$
 D. $0^{\circ}\text{F}, -5^{\circ}\text{F}, 8^{\circ}\text{F}, -10^{\circ}\text{F}$

smallest

22. A housepainter mixed 5 gallons of blue paint to every 9 gallons of yellow paint in order to make a green paint. Which ratio of gallons of blue paint to gallons of yellow paint will make the same shade of green? (6.4C)

Blue : Yellow
 $5 : 9$
 $\times 6$
 $30 : 54$

- A. 30 : 54
 B. 6 : 10
 C. 10 : 45
 D. 27 : 15

23. George wrote an integer. The opposite of George's integer is -53. Which of these statements about George's integer must be true? (6.2B)

53

- I. The integer is 53.
 II. The integer has an absolute value of -53.
 III. The integer is -53.
 IV. The integer has an absolute value of 53.

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

24. The length of a pencil is 19 centimeters. Which measurement is the same as 19 centimeters? (6.4H)

- A. 1.9 meters
 B. 190 millimeters
 C. 280 meters
 D. 19 millimeters

1 centimeter = 10 millimeters
 $19 = 10 \times 19$
 $= 190$

25. To make pink paint, Sylvia mixes 7 cups of white paint to every 3 cups of red paint. Which table shows the possible values of w , the number of cups of white paint Sylvia uses, and r , the number of cups of red paint? (6.5A)

White : Red
 $7 : 3$

A.

Pink Paint				
White Paint, w (cups)	7	49	343	2,401
Red Paint, r (cups)	3	9	27	81

B.

Pink Paint				
White Paint, w (cups)	7	8	9	10
Red Paint, r (cups)	3	4	5	6

C.

Pink Paint				
White Paint, w (cups)	7	14	21	28
Red Paint, r (cups)	3	6	9	12

D.

Pink Paint				
White Paint, w (cups)	7	6	5	4
Red Paint, r (cups)	3	4	5	6

