

# Unit 1-Operations on Rational Numbers Review

Name \_\_\_\_\_

Date:

→ Directions: You must show or explain how you found each answer. Answers only will not receive credit.

## 7.NS.1

1. Evaluate.

$$\frac{1}{2} + -\frac{4}{5}$$

2. The temperature at 6:00 a.m. was  $-6^{\circ}\text{F}$ . At 2:00 p.m. the temperature had increased  $20^{\circ}\text{F}$ . What was the temperature at 2:00 p.m.?

3. The height of Tom's house from ground level to the top of the roof is  $23\frac{5}{8}$  feet. The basement floor of his house is  $7\frac{1}{2}$  feet below ground level. What is the distance, in feet, between the top of the roof and the basement floor?

4. Evaluate.  $-12.5 - 0.3$

5. At 8:00 a.m. the temperature outside was  $-10^{\circ}\text{C}$ . At 6:00 p.m., the temperature was  $35^{\circ}\text{C}$ . By how many degrees Celsius ( $^{\circ}\text{C}$ ) did the temperature increase from 8:00 a.m. to 6:00 p.m.?

6. What equation is modeled on the number line below?



7. The highest point on Earth is 29,035 ft. above sea level. The lowest point on Earth is 8,327 ft. below sea level. What is the difference in elevation?

8. Evaluate.  $(-28) + (-8)$

9. Solve.  $3 + d = -30$

10. Solve.  $W = 38 - (-5)$

**7.NS.2**

11. Evaluate.  $(-8)(-9)$

12. Evaluate.  $-48 \div 12$

13. Evaluate.  $\frac{105}{-3}$

14. Evaluate.  $\frac{2}{7} \times -\frac{1}{5}$

15. Evaluate.  $\frac{3}{5} \div -\frac{5}{6}$

16. The product of two numbers is  $-24$ . If one of the factors is , what is the other integer? Show or explain how you found your answer.

17. On Friday, the temperature changed  $-42^{\circ}\text{F}$  from 12:00 p.m. until 6:00 p.m. If the temperature change was the same every hour, what was the hourly rate of change?

18. Mrs. Jones is buying two toys. The original costs for each toy are \$6 and \$9. The toys are on sale for off  $\frac{2}{3}$  off. Mrs. Jones wrote the expression  $\frac{2}{3}(6 + 9)$  to find the discount on both toys.

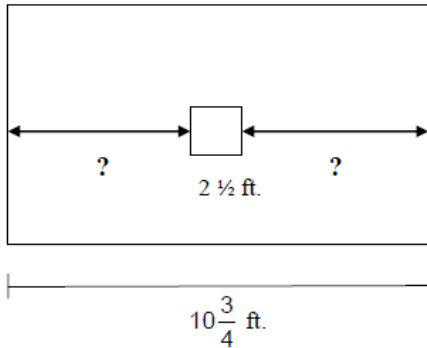
*Write another expression, using the numbers in the problem, that can be used to find the discount on both toys. Show or explain why the expression is the same as Mrs. Jones' expression.*

# Unit 1-Operations on Rational Numbers Review

Name \_\_\_\_\_

Date:

19. Hugo wants to place a picture frame in the center of a wall that is  $10\frac{3}{4}$  feet wide. The picture is  $2\frac{1}{2}$  feet wide.



How many feet from each side of the wall will the frame be?  
Show or explain how you found your answer.

20. At 2:30 <sub>AM</sub> the temperature in Concord, NH is  $-5^{\circ}\text{F}$ . The temperature drops  $\frac{3}{4}$  of a degree in 30 minutes. What is the temperature in Concord at 3:00 <sub>AM</sub> ?

A.  $-4.\bar{3}^{\circ}\text{F}$       B.  $-5.75^{\circ}\text{F}$       C.  $-5.25^{\circ}\text{F}$       D.  $-6.\bar{6}^{\circ}\text{F}$

21. Which fraction converts to a terminating decimal?

A.  $\frac{1}{3}$       B.  $\frac{3}{16}$       C.  $\frac{4}{7}$       D.  $\frac{5}{6}$

22. Bill is playing a game. He chooses one fraction card and one decimal card that have the same value. What 2 cards might Bill choose?

$\frac{2}{3}$	$\frac{6}{8}$	$0.\bar{6}$	1.5	0.75	$1.\bar{3}$	1.25	0.83
$\frac{5}{4}$	$\frac{5}{6}$	0.8	$0.8\bar{3}$	1.2	0.67	1.3	1.33

Bill could choose the fraction \_\_\_\_\_ and the decimal \_\_\_\_\_.

