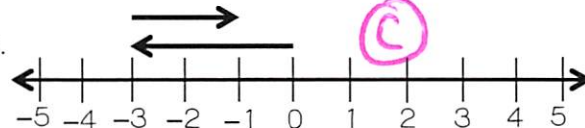
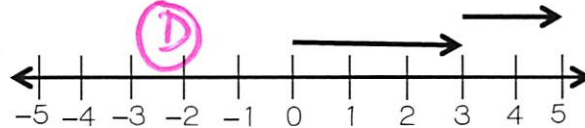


NUMBER SYSTEM TEST

Solve the problems below. Be sure to show your thinking.

<p>1. Determine the additive inverse of -9.2.</p> <p>A. 9.20 B. -9.2 C. 0 D. -9.20</p> <p style="text-align: center; color: magenta; font-size: 1.2em;">opposite</p>	<p>2. Solve. $-11.0 - 3.5$</p> <p style="text-align: center; color: magenta; font-size: 1.2em;">$-11.0 + -3.5$ -14.5</p>
<p>3. Which of the following situations combine to make zero?</p> <p>A. The temperature falls 10 degrees below zero and then rises to 10°F.</p> <p>B. A friend borrows \$20 and promises to return double the amount.</p> <p>C. A start-up business has income equal to its expenses.</p> <p style="text-align: right; color: magenta; font-size: 1.2em;">Back to 0!</p>	
<p>4. Solve. $-\frac{3}{4} + (-\frac{3}{8})$</p> <p style="text-align: center; color: magenta; font-size: 1.2em;">$-\frac{6}{8} + -\frac{3}{8} = -\frac{9}{8}$ $-1\frac{1}{8}$</p>	<p>5. $\frac{5}{12}$ is a rational number. Explain why below.</p> <p style="text-align: center; color: magenta; font-size: 1.2em;">Because any # that is a terminating decimal is rational (can be written as a fraction)</p>
<p>6. Which property is being used in the second line?</p> <p style="text-align: center;">$(4.5 \cdot -1) \cdot -6$ $4.5 \cdot (-1 \cdot -6)$ $4.5 \cdot 6$ 22</p> <p>A. Distributive B. Commutative C. Associative D. Additive Inverse</p> <p style="text-align: center; color: magenta; font-size: 1.2em;">Grouping!</p>	<p>7. Emma borrowed \$89.40 from her sister. She determines that she can pay her back in six months worth of allowance. What effect will Emma's repayment have on her monthly bank account?</p> <p style="text-align: center; color: magenta; font-size: 1.2em;">$6 \overline{) 89.40}$</p> <p>A. $-\\$84.90$ B. $\\$14.90$ C. $-\\$14.90$ D. $-\\$16.98$</p>
<p>Match the following number line models to the appropriate equation.</p>	
<p>8. </p> <p>A. $-3 + (-2)$ B. $3 + (-2)$ C. $-3 + 2$</p>	<p>9. </p> <p>D. $3 - (-2)$ E. $-3 - 2$</p> <p style="text-align: center; color: magenta; font-size: 1.2em;">$3+2$ $-3+-2$</p>

10. Use the distributive property to multiply the rational numbers below.

$$4 \cdot \left(-2\frac{3}{8}\right) = + \left(9\frac{1}{2}\right)$$

$$+4 \cdot +2 + +4 \cdot +\frac{3}{8}$$

$$8 + 1\frac{1}{2} =$$

11. Solve.

$$\frac{7}{8} \div -\frac{1}{6}$$

A. $-\frac{7}{48}$ B. $-5\frac{1}{4}$

C. $-5\frac{1}{8}$ D. $-5\frac{1}{2}$

$$\frac{7}{8} \times -\frac{6^3}{1}$$

$$-\frac{21}{4} = -5\frac{1}{4}$$

12. Precipitation for the month of March was $4\frac{3}{4}$ inches less than average. In April the precipitation was $1\frac{1}{2}$ inches less than average. How many inches below average was the precipitation for both March and April?

$$-4\frac{3}{4} + (-1\frac{1}{2})$$

$$-5\frac{3}{4} = -6\frac{1}{4}$$

13. The record low temperature in Fargo, ND is -35°F . The record high is 114°F . What is the difference in the record high and the record low temperatures?

$$114 - (-35)$$

$$149^\circ\text{F}$$

14. Determine if the following statement is true or false.

Multiplying two rational numbers with the same signs will always result in a positive number.

True

15. Solve.

$$26.04 \div -6.2$$

$$-4.2$$

16. Solve.

$$-3.5 \cdot -9 \cdot -1$$

~~$$-3.5 \cdot -9$$~~

$$(-3.5)(9)$$

$$-31.5$$

17. A skydiver took 10 seconds to drop 500 feet. What is the rate of descent of the skydiver?

A. 50 feet per second

B. 5000 feet per second

C. 50 feet per second

D. -5000 feet per second

$$\frac{-500}{10}$$

$$= -50$$

18. A container of rainwater is evaporating at 1.6 inches a week. How many weeks will it take for the rainwater in the container to evaporate 24 inches?

A. 18 weeks

B. 12 weeks

C. 8 week

D. 15 weeks

$$\frac{24}{1.6}$$