1.8 **Learning Opportunity** Name: _____

Multiplying and Dividing Integers

Solve each of the mathematical expressions below.

1) $-3(11)$

2) $-9 \times (-7)$

3) $5(-2) \cdot 9$

4) $63 \div (-9)$

5) $\frac{0}{-12}$

6) $-7(-5)^2$

Substitute the variable values: $a = -2$, $b = 3$, $c = -7$, and $d = 4$ into each expression below. Then, solve each expression.

7) $b(a - c)$

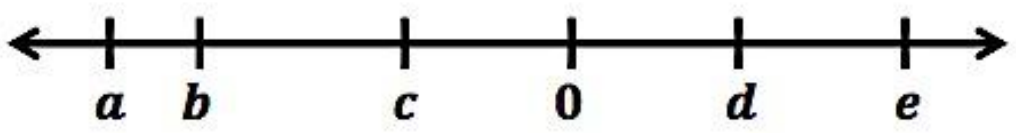
8) $4a \div d$

9) $9a - (4d + 2c)$

10) $a(b + c) - 7$

11) During hibernation, an Arctic ground squirrel can decrease its body temperature to -30 °C. Use the formula $F = \frac{9}{5}C + 32$ to convert the squirrel's body temperature to degrees Fahrenheit. (F represents degrees Fahrenheit and C represents degrees Celsius. Substitute -30 for C in the algebraic equation above. Then solve the equation to determine the Fahrenheit temperature).

For problems 12 through 17, use the number line pictured below to complete the comparisons by filling in each ◯ with <, =, or >.



12) $a \div c$ ◯ 0

13) $d \div c$ ◯ 0

14) $e \div d$ ◯ a

15) $0 \div a$ ◯ $0 \div e$

16) $e \div a$ ◯ $e \div d$

17) $c \div d$ ◯ $a \div b$