

Name: _____

1. Simplify.

a) $(-4) + (+7)$

b) $(-5) + (+7) + (-2) + (+11)$

c) $(-5) - (-7)$

d) $-2 + 6 + 5 - 3 + 8$

e) $(-3) - (+5) + (-9) - (-2)$

2. Simplify.

a) $(-3)(+8)$

b) $(-7)(-2)$

c) $(-3)(-2)(-5)$

d) $(-2)^3$

e) $(-2)^4$

d) $(-3)(+2)(-4)$

e) $\frac{-12}{+4}$

f) $\frac{(-6)(-4)}{(-3)(+2)}$

3. Simplify.

a) $2(7-9) - 4(-5)$

b) $-16 + 10 \div (-2)$

c) $-3(-1+5) - (-1-1)$

d) $4 - 2(7-9)^2 - 11$

e) $2x^2 - 3x - 5$ when $x = -2$

4. Evaluate for $x = -1$ and $y = -4$. Show your substitution and your steps.

a) $-3xy + 8$

b) $2(x - y)$

c) $3 + x^3$

1. Simplify.

$$\begin{aligned} \text{a) } (-4) + (+7) \\ = +3 \end{aligned}$$

$$\begin{aligned} \text{b) } (-5) + (+7) + (-2) + (+11) \\ = (+18) + (-7) \\ = +11 \end{aligned}$$

$$\begin{aligned} \text{c) } (-5) - (-7) \\ = -5 + (+7) \\ = 2 \end{aligned}$$

$$\begin{aligned} \text{d) } -2 + 6 + 5 - 3 + 8 \\ = 19 - 5 \\ = 14 \end{aligned}$$

$$\begin{aligned} \text{e) } (-3) - (+5) + (-9) - (-2) \\ = -3 - 5 - 9 + 2 \\ = -17 + 2 \\ = -15 \end{aligned}$$

2. Simplify.

$$\begin{aligned} \text{a) } (-3)(+8) \\ = -24 \end{aligned}$$

$$\begin{aligned} \text{b) } (-7)(-2) \\ = +14 \end{aligned}$$

$$\begin{aligned} \text{c) } (-3)(-2)(-5) \\ = -30 \end{aligned}$$

$$\begin{aligned} \text{d) } (-2)^3 \\ = -8 \end{aligned}$$

$$\begin{aligned} \text{e) } (-2)^4 \\ = +16 \end{aligned}$$

$$\begin{aligned} \text{d) } (-3)(+2)(-4) \\ = +24 \end{aligned}$$

$$\begin{aligned} \text{e) } \frac{-12}{+4} \\ = -3 \end{aligned}$$

$$\begin{aligned} \text{f) } \frac{(-6)(-4)}{(-3)(+2)} \\ = \frac{+24}{-6} \\ = -4 \end{aligned}$$

3. Simplify.

$$\begin{aligned} \text{a) } 2(7-9) - 4(-5) \\ = 2(-2) - 4(-5) \\ = -4 + 20 \\ = 16 \end{aligned}$$

$$\begin{aligned} \text{b) } -16 + 10 \div (-2) \\ = -16 + (-5) \\ = -21 \end{aligned}$$

$$\begin{aligned} \text{c) } -3(-1+5) - (-1-1) \\ = -3(+4) - (-2) \\ = -12 + 2 \\ = -10 \end{aligned}$$

$$\begin{aligned} \text{d) } 4 - 2(7-9)^2 - 11 \\ = 4 - 2(-2)^2 - 11 \\ = 4 - 2(+4) - 11 \\ = 4 - 8 - 11 \\ = 4 - 19 \\ = -15 \end{aligned}$$

$$\begin{aligned} \text{e) } 2x^2 - 3x - 5 \text{ when } x = -2 \\ 2(-2)^2 - 3(-2) - 5 \\ = 2(4) - 3(-2) - 5 \\ = 8 + 6 - 5 \\ = 14 - 5 \\ = 9 \end{aligned}$$

4. Evaluate for $x = -1$ and $y = -4$. Show your substitution and your steps.

$$\begin{aligned} \text{a) } -3xy + 8 \\ = -3(-1)(-4) + 8 \\ = -12 + 8 \\ = -4 \end{aligned}$$

$$\begin{aligned} \text{b) } 2(x-y) \\ = 2(-1 - (-4)) \\ = 2(-1 + 4) \\ = 2(3) \\ = 6 \end{aligned}$$

$$\begin{aligned} \text{c) } 3 + x^3 \\ = 3 + (-1)^3 \\ = 3 + (-1) \\ = 2 \end{aligned}$$