

1. Evaluate: → plug it in! Use Parenthesis

$$3x^3 - 8y^2 \quad \text{if } x = 2 \text{ and } y = -3$$

$$3(2)^3 - 8(-3)^2 \quad 24 - 72 = \boxed{-48}$$

$$3(8) - 8(9)$$

2. Simplify: Combine Like Terms

a. $\underline{7x}(-4y) - \underline{8} - \underline{3x}(-8y) + \underline{12}$

$$4x - 12y + 4$$

b. $9(\overset{\curvearrowright}{x} - 3) - 1(\overset{\curvearrowright}{x} + 2)$

$$9x - 27 - 1x - 2$$

$$\boxed{8x - 29}$$

3. Write an expression or equation for each:

"The product of a number and 7, increased by three."

"Four times the difference of a number and nine is -30."

Solve each equation. Show your work!

4. $\frac{2}{5}x - 3 = -17$

5. $\underline{\hspace{2cm}}$
 $-12 = 4 - 2x$

6. $-5(x - 2) - (x + 2) = 50$

7. $-7(a - 3) = 11 - 7a$

8. $9(n - 4) - 7n = 32 - 2(n + 8)$

9. $3w - (7w + 12) = 2(w - 3)$

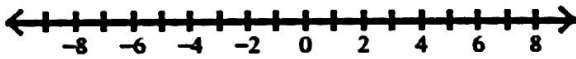
10.

$$3x + 5 < 14$$



11.

$$2(x + 3) \geq 4(x - 1)$$



12 and 13

A rectangle has a length six inches less than twice its width. If the perimeter of the rectangle is inches, find the dimensions.

The sum of two consecutive numbers is 45. Find the numbers.

14.

$$\text{Solve } w = \frac{1}{2}x^2y \text{ for } y$$