

Answer each question as best you can. Show all your work for full credit.

1. **Simplify** each expression below. Be sure your answers do not contain negative or zero exponents.

GOOGLE: SIMPLIFYING EXPRESSIONS USING EXPONENT PROPERTIES

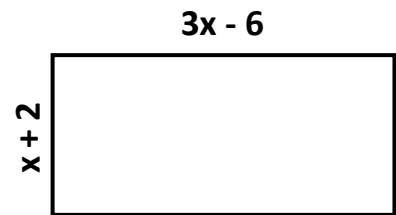
a) $\frac{(2x)^2 y^2}{x^2}$

b) $x^2 y^{-5} \cdot x^3 y^8$

c) $5(x^2)^6$

d) $\frac{x^8 y^5 z^3}{x^0 y^{-6} z^5}$

2. The dimensions of a rectangle are as shown. **GOOGLE:** DISTRIBUTIVE PROPERTY OR AREA MODEL USING GENERIC RECTANGLE



- a) Write the area as a **product**.

- b) Write the area as a **simplified sum**.

- c) Write an expression representing the **perimeter**. Then find the perimeter if $x = \frac{9}{4}$.

- d) Multiply and **simplify** the following expression using the Distributive Property.

$$(2x - 3)(4x + y - 7)$$

3. a) **Solve** and **verify** for x:

GOOGLE: SOLVE EQUATIONS WITH DISTRIBUTIVE PROPERTY

$$-12 + 8x + 42 = 2 + 5(5x - 8)$$

- b) **Solve** and **verify** for x:

GOOGLE: SOLVE EQUATIONS WITH EXPONENTS

$$x^2 - 5 = 76$$

4. a) **Solve** for y . Then state the slope and y -intercept.

GOOGLE: REWRITE EQUATIONS IN SLOPE-INTERCEPT FORM

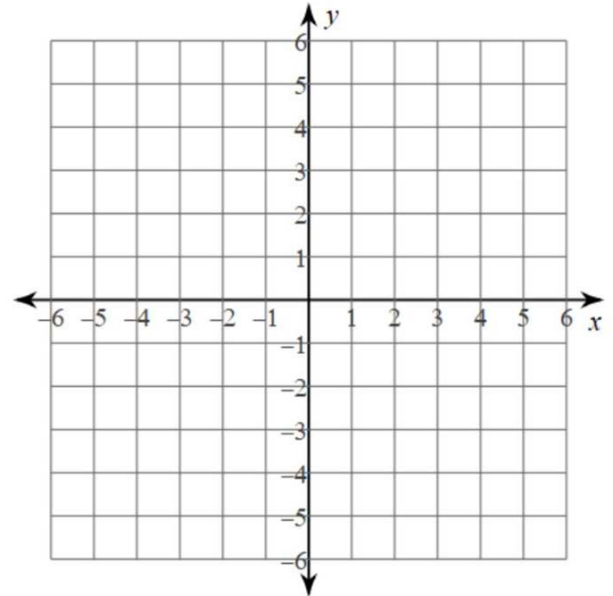
$$5x + 4y = -20$$

Slope: _____

y -Intercept: _____

- b) **Graph** the equation below.

GOOGLE: GRAPH LINEAR EQUATIONS



5. Write an equation in **slope-intercept form** for each of the following situations.

GOOGLE: WRITE THE EQUATION OF A LINE GIVEN CERTAIN INFORMATION

- a) Line R has a slope of $-\frac{3}{2}$ and passes through the point $(4, -3)$.

- b) Line S passes through the point $(-3, 7)$ and is perpendicular to the x -axis.

- c) Line T passes through the points $(-3, 5)$ and $(3, -3)$.