

Instructions: Answer the following in the space provided, be sure to leave evidence of your thinking for each question. You may use your notes for reference.

1. Evaluate:

(a) $-\frac{1}{4} - \frac{5}{8}$

(b) $\frac{3}{4} + \frac{2}{3}$

(c) $\frac{5}{8} \div \frac{1}{4}$

(d) $5 \times (9 + 2^2) - 23$

(e) $(9-2^2) - (-4-2)$

2. Expand and simplify the following:

(a) $12y - 7h + 8y - 5h$

(b) $-7(2x - 3)$

(c) $4a^2(2a - 5)$

3. Simplify the following:

(a) $3b^5 \times 7b^8$

(b) $(3x^4)^2$

(c) $\frac{h^{23}}{h^7}$

(d) $\frac{18a^7b^9}{3a^3b^5}$

4. Solve each of the following equations:

(a) $4x = -36$

(b) $-2z + 11 = 9$

(c) $-3b = 15$

(d) $4x - 8 = 6x + 10$

(e) $3p + 5 = 10 - 2p$

(f) $\frac{12}{x} = \frac{9}{3}$

5. State THREE ways you can find the Slope / Rate of change for a linear relationship:

- a. _____
- b. _____
- c. _____

6. State the slope **and** y-intercept of the line $y = -5x + 1$

7. What is the y value for ALL x-intercepts?

8. Find the x- and y- intercepts of the line $3x - 6y + 12 = 0$

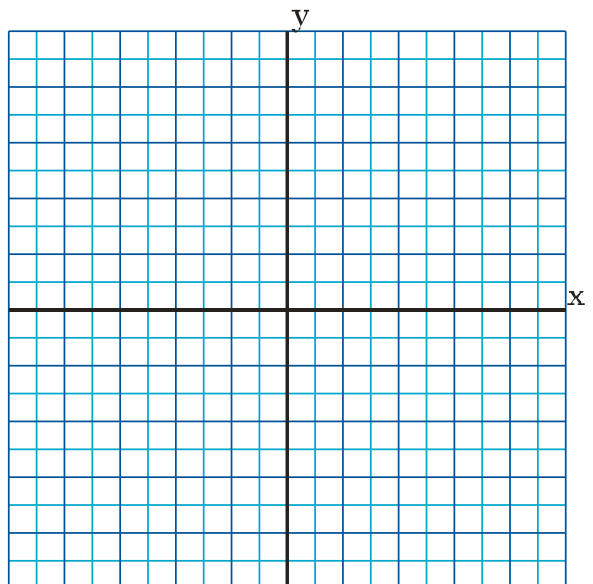
9. What is the **slope** of the line passing through (2,-1) and (6,7)

10. For the following two linear relationships, find the following:

$$y = 2x - 1$$

$$y = -3x + 9$$

Create a table of values from 0 to 4 for both lines.



Graph both lines on the attached grid.

State the slope and y intercept for both lines.

State the location where the two lines intersect.