



- \*15 questions
- \*Calculators allowed
- \*Show all work/steps- use separate paper
- \*Graph paper required
- \*Recommend time frame 30min -45min

### Concept of Writing Linear Equations

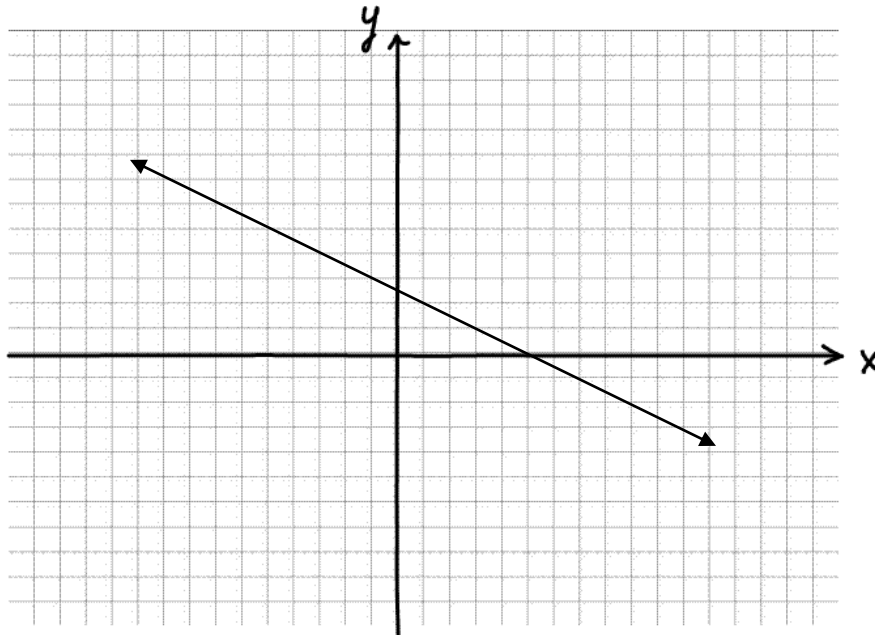
1. True or False? If given two points on a line is that enough information to find the equation of that line.
2. What is the point-slope formula?
3. What does the "b" represent in slope-intercept formula,  $y = mx + b$  ?
4. Find and explain the steps to find the x-intercept of the line  $y = -3x + 6$  .
5. Will the line  $y = \frac{1}{3}x + 4$  ever intersect with the line  $y = \frac{3}{9}x - 5$  ? (explain)

### Finding the Equation of a Line

Directions: given the information find the equation of the line- use any method unless specified.

6. Write the equation of the line that's y-intercept is (0, 3) and has a slope of 4
7. Write the equation of the line that passes through (-4, 5) and has a slope of 2
8. Write the equation of the line that passes through (0, 7) and (9, 3)
9. Write the equation of the line that passes through (-5, 8) and (-1, 2/3)
10. Write the equation of the line that passes through (21, -40) and has a slope of 4/5

11. Write the equation of the line that passes through  $(-\frac{3}{5}, 7)$  and has a slope of  $1/2$
12. Use the graph to find the equation of the line (*hint: find two points*)



13. Find the x and y intercepts and graph the line:  $-4x + 6y = -12$
14. Write an equation of a line that is parallel to the line  $y = -3x + 7$  and passes through the point  $(-2, -6)$ .
15. Word Problem: A jet airplane is at an altitude of 30,000 feet. The aircraft is capable of climbing at a rate of 1400 ft/min.
  - a. Write a linear model that describes the altitude of the jet if it increases it's altitude from 30,000 feet.
  - b. How many minutes will it take the jet to climb to 53,000 feet from its current altitude of 30,000 feet?