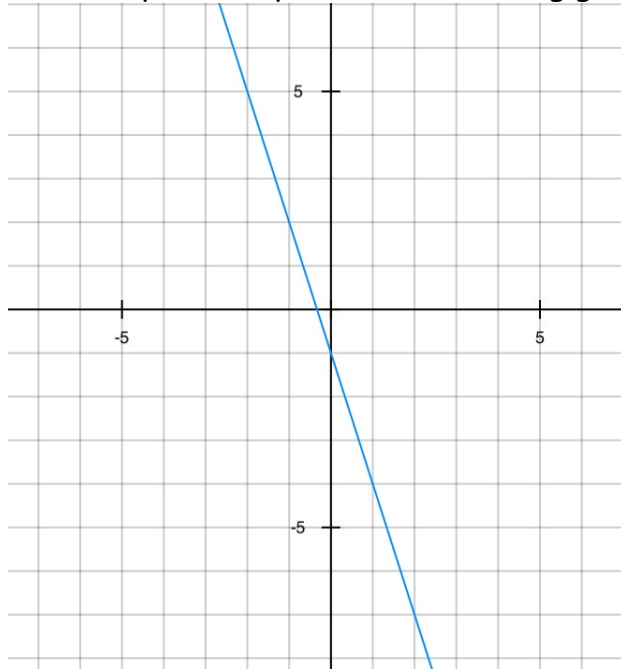


Name: _____ Date: _____ Period: _____

Algebra 1

Study guide for 5.5-5.7 plus some extra material from 5.1 - 5.4

1. Find the x and y intercepts of the following graph.



2. Find the x and y intercepts of the following pattern. $4x - 10y = 100$

3. Write the equation of the line passing through (3, 6) and (-3, -5) in three forms:

Slope:

Slope-Intercept Form:

Point-Slope Form:

Standard form:

4. Write the equation of the line through $(-8, 3)$ both parallel and perpendicular to the pattern $y = \frac{-2}{3}x + 1$ in $y=mx+b$ form.

Parallel:

Perpendicular:

GRAPH EACH LINE. Pay attention to what form the equations are in, and what information you need to find in order to graph each line. **REMEMBER...**

Slope-intercept form ($y=mx+b$): Find slope(m) and y -intercept(b). Use these to graph the line.

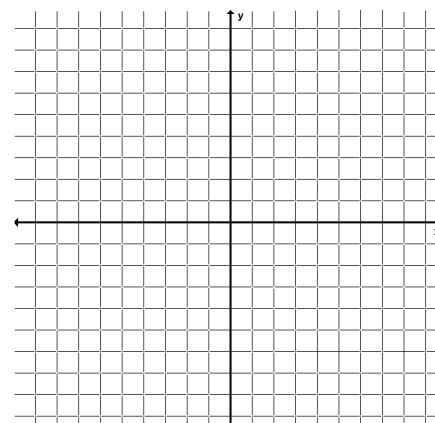
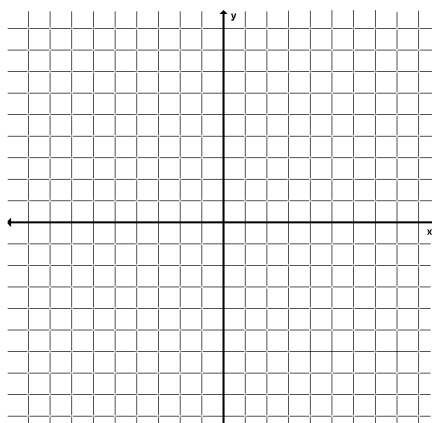
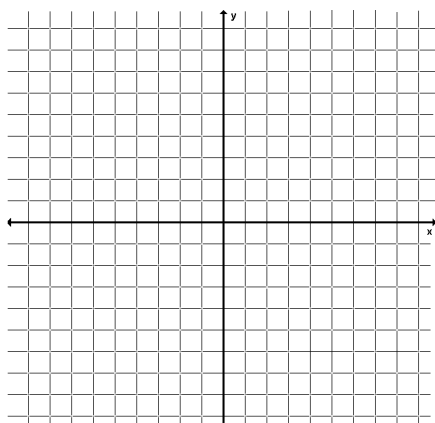
Point-slope form $y-y_1=m(x-x_1)$: Find the slope (m) and the point that it passes through (x_1, y_1) .

Standard form ($ax+by=c$): Find x and y intercepts to find where the graph crosses the x and y -axis.

6. $y - 2 = -\frac{1}{2}(x + 3)$

7. $12x - 6y = 24$

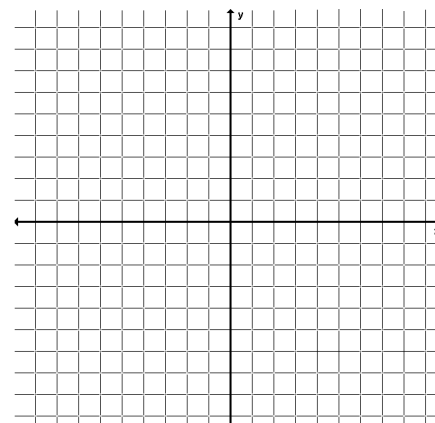
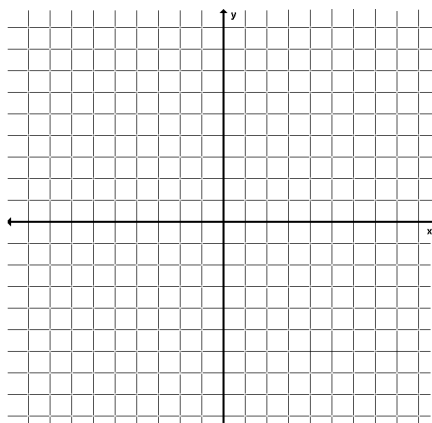
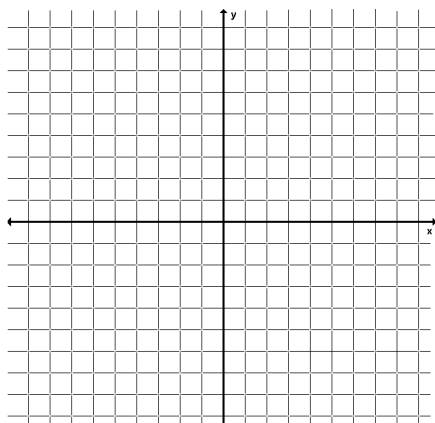
8. $y = \frac{1}{4}x + 3$



9. $25x + 50y = -100$

10. $y = \frac{-4}{5}(x + 3)$

11. $y = 5x - 6$



12. Write an equation of any line parallel to $y = -2x + 7$. Now do it again, this time perpendicular to $y = -2x + 7$.

Parallel:

Perpendicular:

Determine if the following sets of lines are parallel, perpendicular, or neither. If the equations are not in slope intercept form, get them into that form so you can determine the slopes. (Remember: parallel lines-same slope, perpendicular lines-opposite reciprocal slopes)

14. $y = x + 9$
 $y = 4 + x$

15. $y = -\frac{1}{2}x + 3$
 $4x + 8y = 7$

16. $y = -4$
 $x = -4$

17. Compare and contrast interpolation and extrapolation when looking at data.

18. Make up a scenario that has a positive correlation (but does not necessarily have causation).

19. A media download store sells songs for \$1 each and movies for \$12 each. You have \$60 to spend. Write an equation in standard form to represent this situation. Be sure to define your variables so your wonderful teacher will know what the variables mean.

20. Follow-up to #19: What are three combinations of songs/movies that you could have purchased for your \$60?

18. The following set of data is a comparison between the body length of newborn baby boy and his age.

a) Create a scatter plot:



Age (months)	Length (cm)
1	55
3	62
6	67
9	73

b) Write an equation for a trend line.

c) Estimate the length of a 15 month old baby boy.