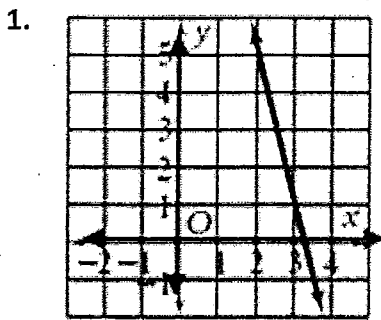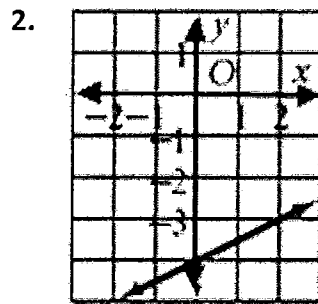**Memorize the formulas for slope, point-slope, slope-intercept and standard form of a line!!!**
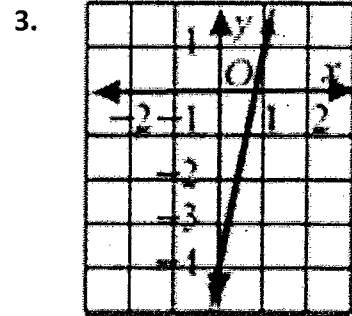
5.1 – Rate of change and slope – Find the slope of each line.

1.

m = _____

2.

m = _____

3.

m = _____

Use the slope formula to find the slope of the two points. Show your work!!

5.   (–5, 2) and (3, 7)

6.   (–2, 4) and (6, –1)

7.   (3, 6) and (1, –2)
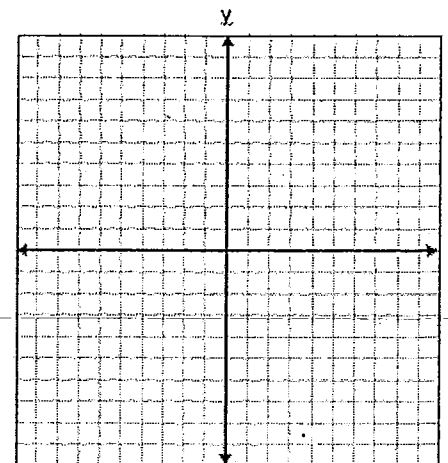
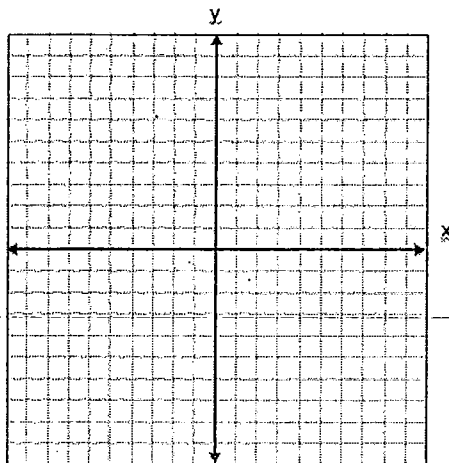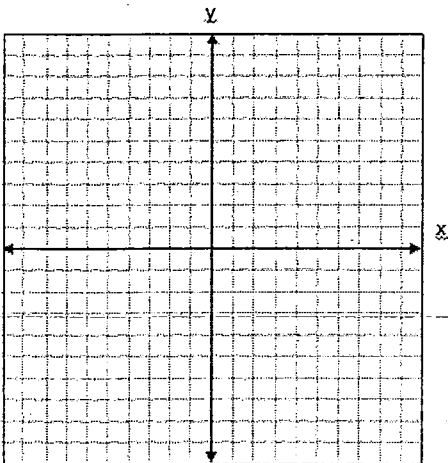8.   (10, 3) and (5, 3)

9.   (5, –6) and (5, 3)

10.   (0, 0) and (4, 8)

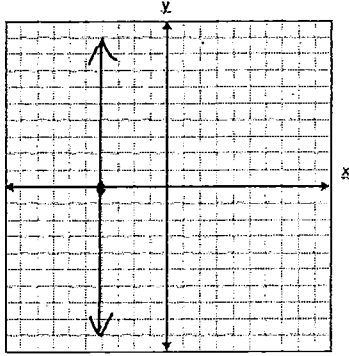**5.3 – Slope-intercept form – Put into slope-intercept form and then graph.**
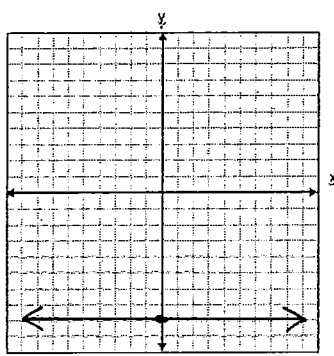
12. $y - 7 = -5x + 2$

13. $3y + 3 = 2x - 3$
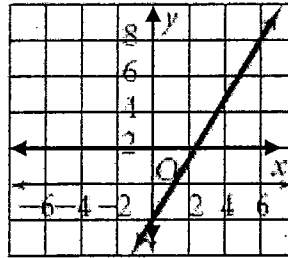
14. $y - \frac{1}{2}x = -4$

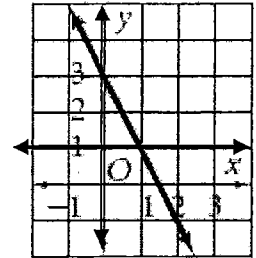**Write the equation of the line in slope-intercept form or use HOYVUX.**

15. _____   16. _____   17. _____   18. _____

5.4 – Point-Slope Form – Write the equation in <u>point-slope</u> form.

19. (3, –8) and m = $-\dfrac{2}{3}$

20. (–2, 5) and m = 4

Write the equation in <u>point-slope</u> form and then convert to <u>slope-intercept</u> form.

21. (3, –2) and m = –4

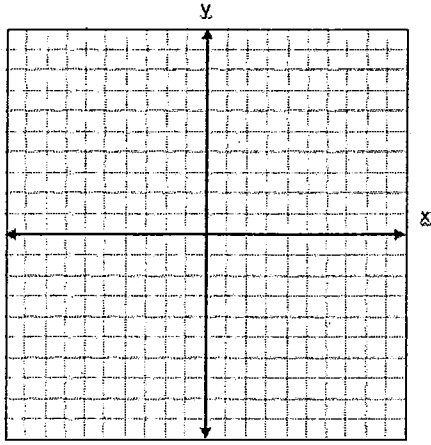22. (–4, 5) and m = $\dfrac{1}{2}$

Find the slope using the slope formula. Write the equation in <u>point-slope</u> form, convert to <u>slope-intercept</u> form, and then to <u>standard</u> form.
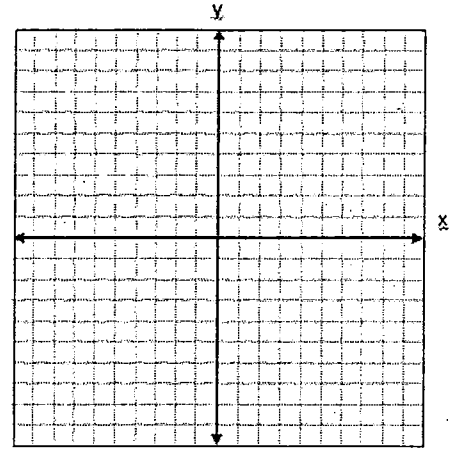
23. (15, 3) and (–3, –6)

24. (–6, 6) and (3, 12)

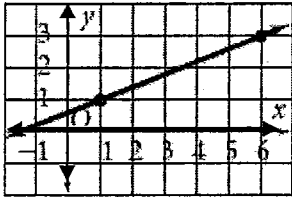**Graph the equation. (Hint: find the slope and the point or convert to slope-intercept form.)**

25. $y-2=-\dfrac{2}{5}(x+5)$

26. $y+3=\dfrac{3}{2}(x-1)$

27. Write the equation of the line in <u>point-slope</u> form and then convert to <u>slope-intercept</u> form.
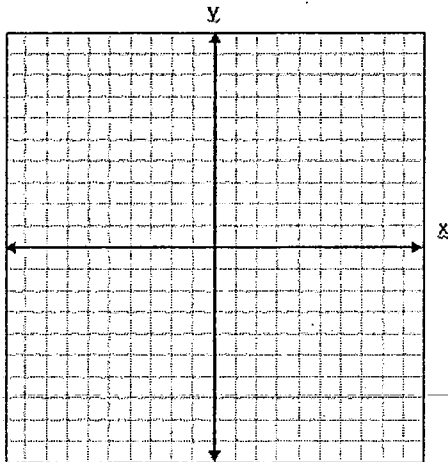
5.5 – Standard Form and Intercepts

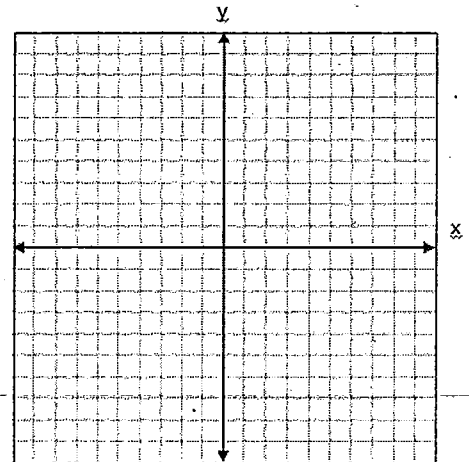**Write the equations in <u>standard form.</u>**

28. $2y = 3x - 7$

29. $y=\dfrac{3}{2}x-8$

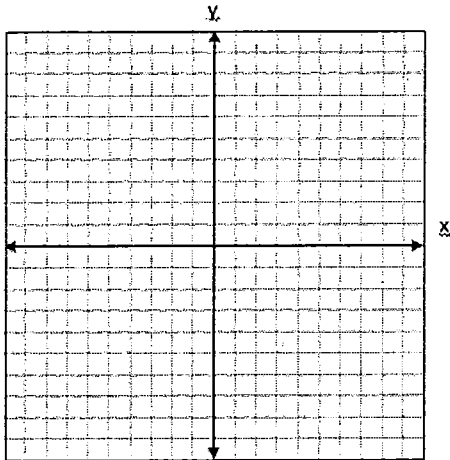**Find the x- and y- intercepts of the given equations and graph.**
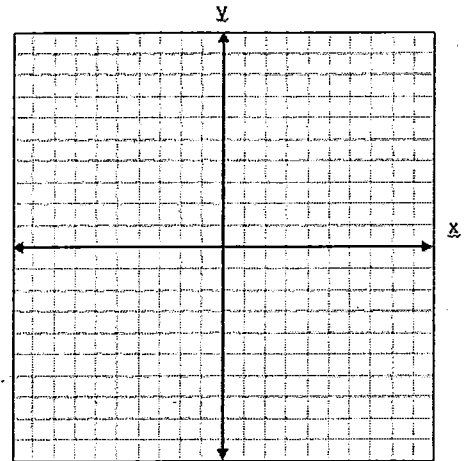
30. $3x-2y=-12$

31. $x-3y=-6$

Find the x- and y- intercepts of the given equations and graph.

32. 2x + 3y = 2

33. 5x – 3y = 15

5.6 Parallel and Perpendicular
Are the following equations parallel, perpendicular, or neither? (Hint: Find the slope of each line).

34. y = 6x – 8

6x – y = –1

35. $y = \dfrac{2}{3}x + 6$

3x + 2y = –5

36. $y = -\dfrac{5}{2}x + 11$

–5x + 2y = 20

Write the equation of the line <u>parallel</u> to the equation and through the point. Leave answer in <u>point-slope</u> form.

37. y = 3x – 4 and (–2, 5)

38. $y = \dfrac{2}{3}x - 3$ and (5, –3)

Write the equation of the line <u>perpendicular</u> to the equation and through the point. Leave answer in <u>point-slope</u> form.

39. $y = -\dfrac{2}{3}x - 5$ and (–3, 7)

40. y + 3x = –5 and (4, 5)

*One last thing...make sure you know how to create a scatterplot and identify its correlation, section 5.7