Name _____ Date _____

Chapter 1-4 Worksheet

Pre-Calculus Period _____

Objectives:

- Write Linear equations.

A. Write an equation in slope intercept form for each line described.

1. Slope = $\frac{1}{4}$, and y-intercept = -10
2. Slope = 5 and y-intercept = -2
3. Slope = $-\frac{3}{4}$, and y-intercept = 0
4. Slope = -12 and y-intercept = $\frac{1}{2}$
5. Slope = -4, *y*-intercept = 3
6. Slope = -3, *y*-intercept = $\frac{3}{4}$
7. Slope = -2, *y*-intercept = -7
8. Slope = 5 and passing through A(-3, 2)
9. Slope = -4 and passing through B(3, 8)
10. Slope = $\frac{4}{3}$ and passing through C(-9, 4)
11. Slope = 1 and passing through D(-6, 6)
12. Slope = -1 and passing through E(3, -3)
13. Slope = -1 and passing through F(-1,7)
14. Slope = 0 and passing through G(3,2)
15. Slope = 8 and passing through H(-7, 5)
16. Slope = 6 and passing through I(4, 5)
17. Slope = 4 and passing through J(3, 2)
18. Passes through (5,2) and (7, 9)
19. Passes through (1, 5) and (-8, 9)
20. Passes through (8, 1) and (-3, 1)
21. Horizontal and passes through (-9,2)
22. No slope and passes through (12, -9)
23. The *y*-axis
24. The x-axis
25. Slope = $0.33\overline{3}$ and *x*-intercept = 3
26. Slope = 0.7 and *x*-intercept = 4
27. Slope = 3.1 and *x*-intercept = -2
28. Slope = 0.25 and *x*-intercept = 24

B. Write each equation in standard form.

29. Passes through Y(-2, -4) and has a slope of $-\frac{1}{2}$.
30. Passes through X(5, 7) and has a slope of $\frac{5}{6}$.
31. Passes through W(5, 7) and has a slope of 0 .
32. Passes through M(-4, 4) and L(2, -1).
33. *x*-intercept = 4 and *y*-intercept =6
34. *x*-intercept = -2 and *y*-intercept =5
35. *x*-intercept = $\frac{4}{5}$ and *y*-intercept =-2
36. *x*-intercept = -5 and *y*-intercept =$-\frac{3}{4}$
37. Passes through C(-2, 0) and D(1, -3).
38. Passes through E(-5,8) and F(4, 6).
39. No slope passing through (-2, -5)

C. Word Problems

40. *Botany*: Do you feel like every time you cut the grass it needs to be cut again right away? Be grateful you aren't cutting the Bermuda grass that grows in Africa and Asia. It can grow at a rate of 5.9 inches per day! Suppose you cut a Bermuda grass plant to a length of 2 inches. (a) Write an equation that models the length of the plant *y* after *x*-days. (b) If you didn't cut it again, how long would the plant be in one week? (c) Can this rate of growth be maintained indefinitely? Explain.