Assignment 1.2.4

Name _____ Per___

A. Find the equation of the line that passes between the points $(3, 32)$ *and* $(33, \ 52)$
   (keep values exact and show work)

B. Factor, completely, the following four expressions (*into 2 or more factors*):

$5x^2 - 40$ $\quad\quad\quad$ $5x^2 - 40x$ $\quad\quad\quad$ $5x^2 - 45$ $\quad\quad\quad$ $4x^2 + 22x + 24$

$=$ $\quad\quad\quad\quad\quad$ $=$ $\quad\quad\quad\quad\quad$ $=$ $\quad\quad\quad\quad\quad$ $=$

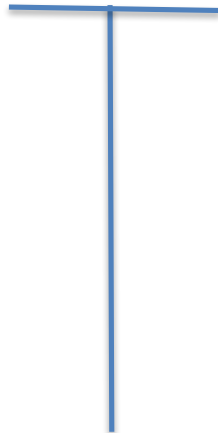$\quad\quad\quad\quad\quad\quad\quad\quad\quad\quad\quad\quad\quad\quad\quad\quad\quad\quad\quad\quad\quad\quad$ $=$

C. Solve the quadratic equation $(3x - 10)(5x + 70) = 0$ hopefully the quick way! *The other ways will take you until Valentines Day.*

D. Johnny Depp got a pet snake for his birthday. It was only 10 cm long. However, it grew around 2.5 cm per week. Create three representations of a function for which the inputs are the #weeks since his birthday and the outputs are the length of the snake.
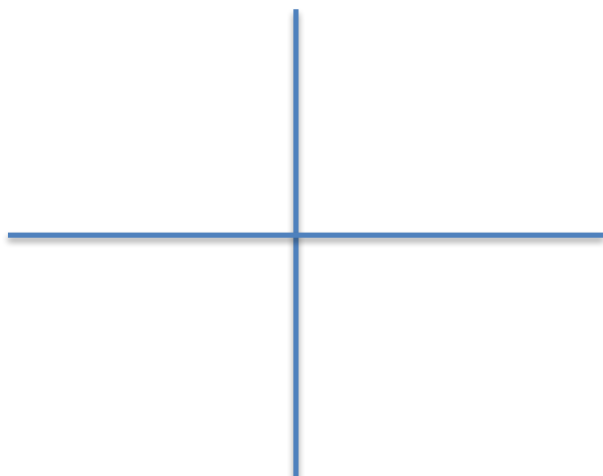
An Equation $\quad\quad\quad\quad\quad\quad$ **A Table** $\quad\quad\quad\quad\quad\quad\quad\quad\quad\quad\quad$ **A labeled *sketch* of a the graph**

E.   In this chapter you were given the 9 Function Investigation Questions to use to analyze functions. You will use them now.

Use the 9 Function Investigation Questions to analyze $f(x) = 2\sqrt{x + 2} - 6$
(be sure to make a sketch)

G.   You do **<u>not</u>** have to solve the equations below.

You should be able to solve all of them, however, for the upcoming Ch. 1 test. If you need practice with some or all, then do them for extra practice. Answers will be provided in class. *(you should be able to show your steps clearly as you solve them.)*