

Useful Guidelines:

- * **Relation:** A set of ordered pairs. [Example: $S = \{(-1,3), (2,4), (3,-2), (4,5)\}$]
- * **Domain:** In a relation consisting of ordered pairs (x,y) , the set of x -values is the domain.
- * **Range:** In a relation consisting of ordered pairs (x,y) , the set of y -values is the range.

WJ
Good job!

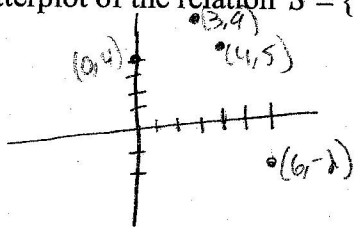
1. Identify the domain and range of the following:

$S = \{(-1,2), (1,3), (5,-1), (9,2)\}$

$d: \{-1, 1, 5, 9\}$

$r: \{2, 3, -1, 2\}$

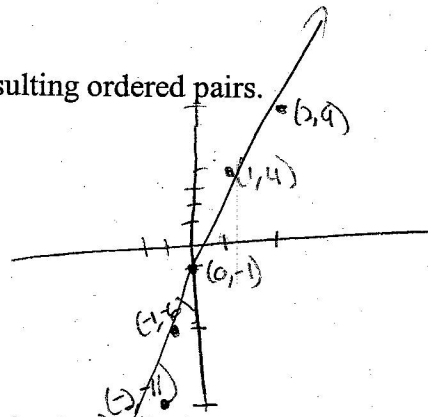
2. Make a scatterplot of the relation $S = \{(0,4), (3,9), (6,-2), (4,5)\}$.



v. neat!

3. Evaluate $y = 5x - 1$ for $x = -2, -1, 0, 1$ and 2 . Plot the resulting ordered pairs.

$y = 5(-2) - 1$	$y = -11 \quad (-2, -11)$
$y = 5(-1) - 1$	$y = -6 \quad (-1, -6)$
$y = 5(0) - 1$	$y = -1 \quad (0, -1)$
$y = 5(1) - 1$	$y = 4 \quad (1, 4)$
$y = 5(2) - 1$	$y = 9 \quad (2, 9)$



4. Suppose $f(x) = 4x^2 + 3x$ thousand dollars can be earned, where x is the number of years after 2006.

a. What is $f(3)$? $4(3)^2 + 3(3) = 45 + \text{thousand dollars}$

b. The answer to part (a) gives the number of thousand dollars earned for what year?

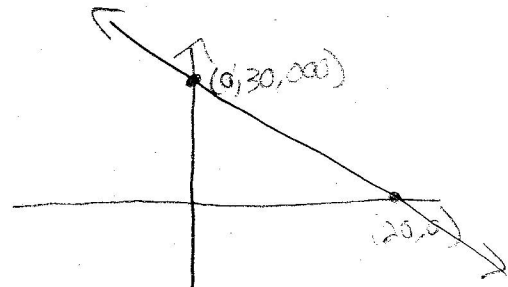
Year = $\boxed{2009}$

5. Suppose a car valued at \$30,000 is depreciated over 3 years by the straight-line method, so that its value x years after the depreciation began is $f(x) = 30,000 - 1,500x$.

a. Graph this function.

$f(x) = 30,000 - 1,500x$

0	30,000
20	0



b. What is the value 2 years after the depreciation is started?

$f(2) = 30,000 - 1,500(2)$

$f(2) = 27,000$