

Problem of the Day: State the independent & dependent variable.

a. number of touchdowns scored vs. total score  
 independent/dependent

b. number of copies needed vs. number of students  
 dependent/independent

Plan for the Day: Collect signed tests  
 Finish notes from yesterday - ind. vs. dependent  
 Finish Monday's card sort & new card sort  
 Homework Week 5 is due tomorrow

Objective: We will be able to identify independent and dependent variables and domain and range.  
 Today is National Comic Book Day!!

9.  $x = -1$   
 $|+ +| = 2$

Equations can also have independent and dependent variables.

For example,  $y = 2x + 1$ . The value of  $y$  depends upon what numbers are put in for the independent variable,  $x$ .

You can make a T-chart to determine the values.

$x$	$2x + 1 = y$	
7	$2 \cdot 7 + 1$	15 (7, 15)
5	$2 \cdot 5 + 1$	11 (5, 11)
-4	$2 \cdot -4 + 1$	-7 (-4, -7)

Example: Determine the range of dependent values when given the domain values.

a.  $y = 3x + 8$  if  $D = \{-1, 4, 7\}$

$x$	$3x + 8$	$y$
-1	$3 \cdot -1 + 8$	5
4	$3 \cdot 4 + 8$	20
7	$3 \cdot 7 + 8$	29

$R: \{5, 20, 29\}$

b.  $y = -2x - 1$  if  $D = \{-5, 0, 5\}$

$x$	$-2x - 1$	$y$
-5	$-2 \cdot -5 - 1$	9
0	$-2 \cdot 0 - 1$	-1
5	$-2 \cdot 5 - 1$	-11

$R: \{9, -1, -11\}$