Ways to check if you are working with a *linear* function.

From a Rule: Equation will have an exponent of _____ as its highest power.

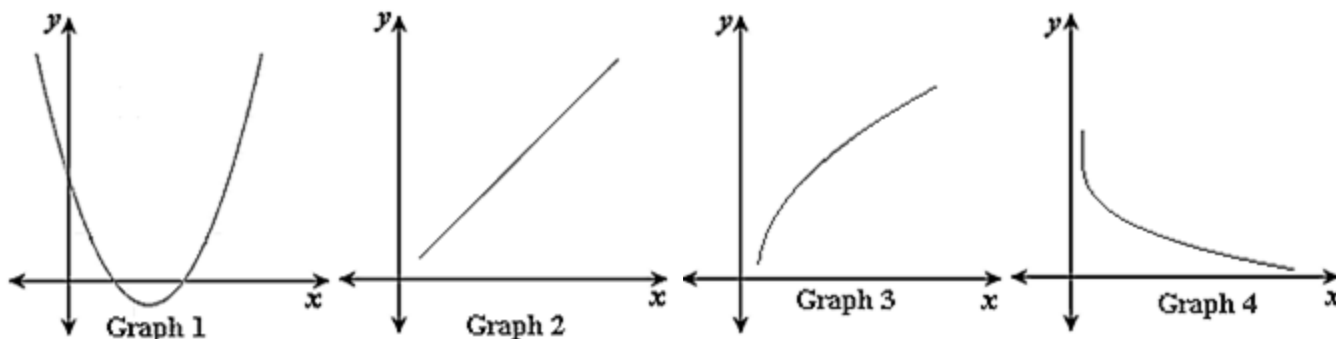$f(x) = 2x + 5$ $g(x) = 3x^2 - 4x + 8$ $h(x) = |x - 4|$ $k(x) = 3^x + 2$

From a Graph: It is a _____.

Graph 1   Graph 2   Graph 3   Graph 4

From a Table: There is a _____ rate of change.

x	$f(x)$
– 4	– 10
– 2	– 8
0	– 6
2	– 4
4	– 2

Table 1

x	$f(x)$
– 4	16
– 2	4
0	0
2	4
4	16

Table 2

x	$f(x)$
– 4	– 8
– 2	– 4
0	0
2	4
4	8

Table 3

x	$f(x)$
– 4	– 1
– 2	1
0	3
2	5
4	7

Table 4

From a Description: Look for clue words such as "*per*" or "*every*".

You are in charge of reserving a hotel room for a vacation. Rooms cost $175 for the week plus a $5 cleaning charge per night.   Write a function for the total cost C(*n*) of staying at the hotel for *n* number of nights.

Joe has $20 in his wallet, but spends $3 each day on lunch. Write a function for the amount of money M(*d*) in Joe's wallet after *d* days.

Kayla has 5 pairs of jeans and buys one new pair every month. Write a function for the number of pairs of jeans Kayla owns after *m* months.

In Class Activity:

Match each linear equation with its graph, table, and description. Write the numbers for your matching sets in the grid below.

Equation Rule	1	2	3	4	5	6	7	8	9	10
Graph										
Table										
Description										

Check your answers when done.

<u>Homework:</u> Complete the Unit 2 Day 1 – 4 Review Worksheet