MS 100 (Fall 2019) - **Sample Test 3** (2.1 - 2.4)   REV 11/2019

01. (04 pts) Consider the slope-intercept form of the line: $y = -2x + 3$

a) What is the slope of this line?

b) What is the y-intercept of this line?

02. (04 pts) Find the slope of the line passing through the points $(1, 3)$ and $(7, 10)$.   Slope =

03. (04 pts)   Find the equation of the line passing through the points (2,1) and (6,9). Write the equation in slope-intercept form.

04. (1 pt each) For each of the following tables below, decide if the table describes a function. (Circle YES or NO)

a)
input	−1	−2	0	3	4
output	4	6	4	8	9
YES or NO

b)
input	−1	−2	0	3	4
output	5	6	4	8	9
YES or NO

c)
input	−1	−2	0	−1	4
output	5	5	5	5	5
YES or NO

d)
input	−1	−2	0	3	4
output	7	8	9	9	9
YES or NO

05. (04 pts) TRUE or FALSE: If $2x + 3y = 4$, then y is a function of x.

06. (04 pts) TRUE or FALSE: If $2x^2 + 3y = 4$, then x is a function of y.

07. (04 pts) TRUE or FALSE: If "y is a function of x", then one value of x can be assigned to two values of y.
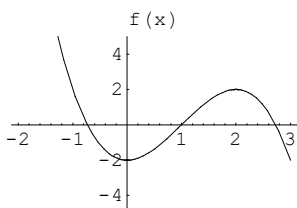
08. (04 pts) $f(x) = 5x + 4$

a) Find $f(0)$ =

b) Find the zeros of f.   **zeros of f are   x = _____**

09. (04 pts) Find the zeros of $g(x) = x^2 - 4x - 5$ **zeros of g are   x = _____**

10. (04 pts)   For the function graphed below, describe the intervals where the function is:

a) INCreasing

b) DECreasing

c) CONstant

11. (10 pts) For this problem, use the graph of the function f that you see below.

   a) TRUE or FALSE: The number 4 is in the domain of f.

   b) TRUE or FALSE: The number 0 is in the domain of f.

   c) TRUE or FALSE: The function is decreasing on the entire interval from $x = -1$ to $x = 3$

   d) TRUE or FALSE: The number 1 is in the range of f.

   e) List the zero(s) of f:

   f) What is $f(2) =$

   g) If f has a local maxima or a local minima, what are the coordinate(s) where they occurs?
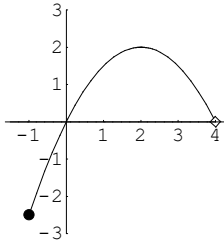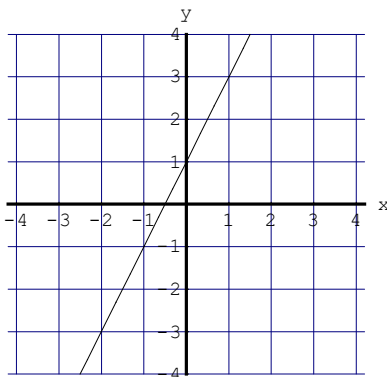

12. (06 pts) For this problem, use the graphs below, which are labelled (A), (B), (C), (D).

   a) Which graph(s) have y-axis symmetry?

   b) Which graph(s) have origin symmetry?

   c) Which graph(s) represent an odd function?

   d) Which graph(s) represent an even function?

   e) According the Vertical Line Test, which graph(s) represent y as a function of x?
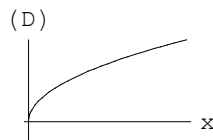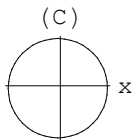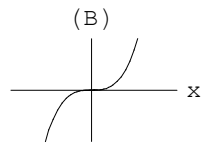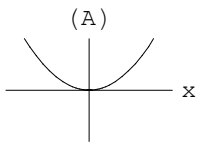
13. (10 pts) Look at the line below and estimate the slope. m = _____

14. (10 pts) For each graph below, write the formula for the function it represents, the write its English name:

<u>Formula</u>   <u>English Name</u>

A)

B)

C)

D)

E)

F)