

**General Instructions: If there is any work to show, show it!**

1. (on next page...)

2. Circle the letter of each equation that IS a function:

A:  $y = 4x - 5$

B:  $x^2 + y^3 = 10$

C:  $y^2 + x^3 = 10$

D:  $x = y - 5$

E:  $x^3 + y^3 = 10$

F:  $y^4 + x^4 = 10$

H:  $y = |x| - 5$

I:  $|y| = x - 5$

J:  $|y| = |x| - 5$

3. Given the following functions, find each of the following. Simplify your answer if it needs to be simplified.

$f(x) = x + 1$

$g(x) = 3 - x$

$h(x) = x^2 + 1$

a)  $f(-3)$

b)  $g(-3)$

c)  $h(-3)$

d)  $f(y)$

e)  $g(y)$

f)  $h(y)$

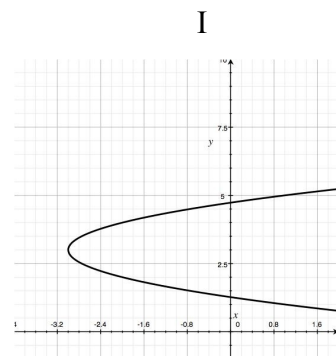
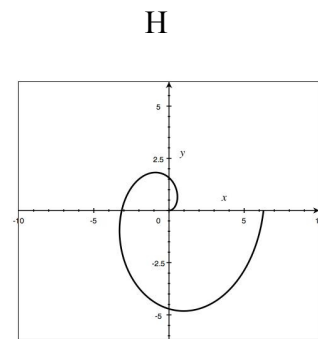
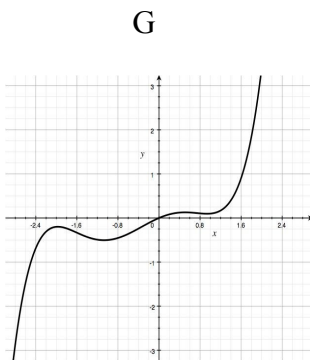
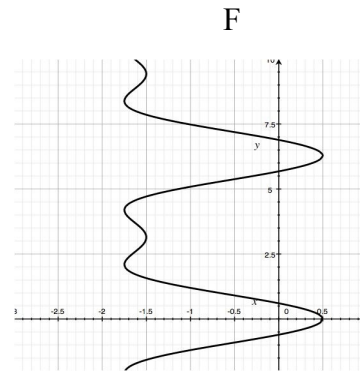
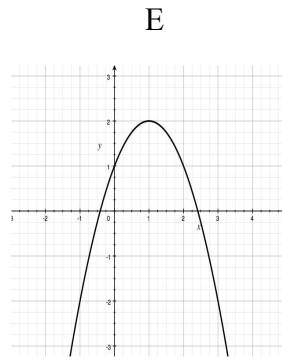
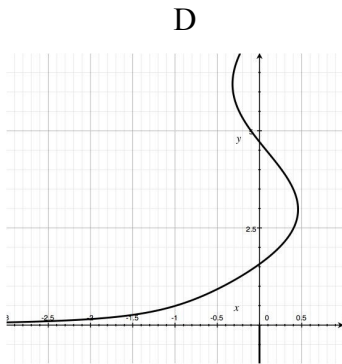
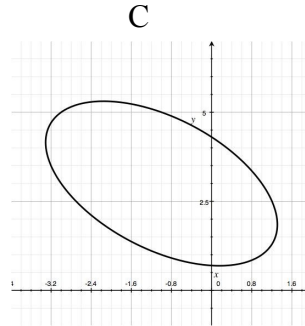
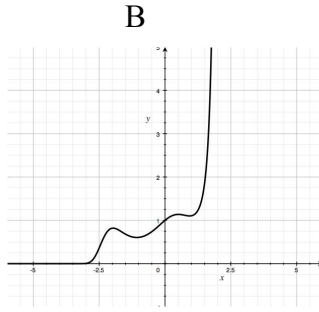
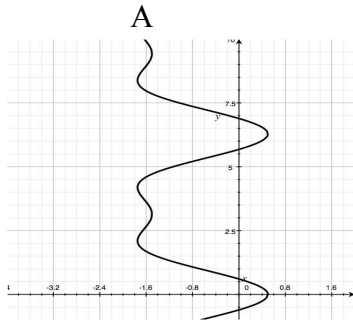
g)  $f(y + 6)$

h)  $g(y + 6)$

i)  $h(y + 6)$

Answers: Problem 1: B, E, G; Problem 2: A, B, D, E, H; Problem 3: a) -2; b) 6; c) 10; d)  $y + 1$ ; e)  $3 - y$ ; f)  $y^2 + 1$ ; g)  $y + 7$ ; h)  $-y - 3$ ; i)  $y^2 + 12y + 37$

Problem 1: Circle the letter of each graph below that IS a function:



*(more problems on the other side...)*