

Math 111 Worksheet 1

Show all work for full credit.

1. Rewrite each of the following inequalities using interval notation.

a. $x < -7$ or $x \geq 1$

b. $3 \leq x < 14$

2. Perform the operation and write your answer as a polynomial in standard form.

a. $(x^2 + 3x - 4)(x + 5)$

b. $(x + 5)(x - 2)(x + 3)$

c. $5(x + 2)^2$

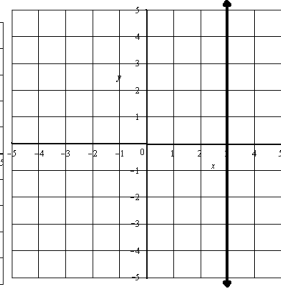
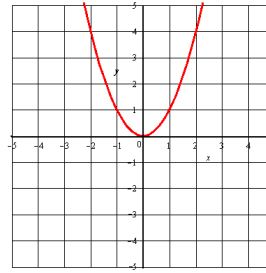
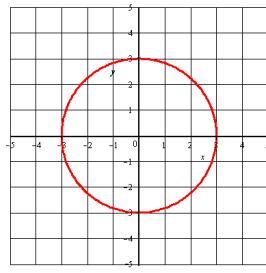
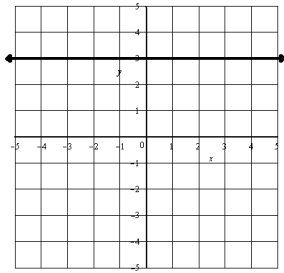
3. Consider the following table of values:

B	-2	0	2	4	6	8
C	4	0	4	16	36	64

a. Is C a function of B? If so, express this using function notation. If not, explain why.

b. Is B a function of C? If so, express this using function notation. If not, explain why.

4. Decide whether each of the following could be the graph of a function.



Function? _____

Function? _____

Function? _____

Function? _____

Explain your choices.

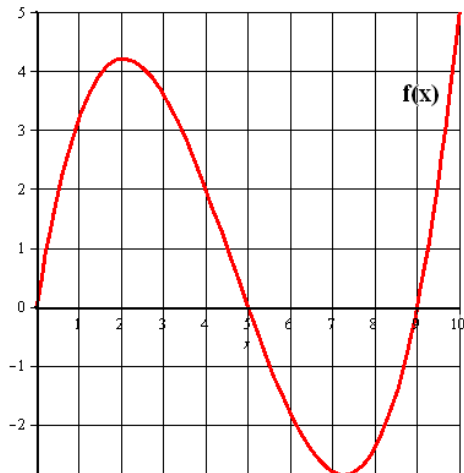
5. Let $f(x) = 5x^2 + 3x - 7$. Find each of the following.

a. $f(5)$

b. $f(-3)$

c. $f(4x)$

6. Consider the following graph of $f(x)$. Find each of the following.



a. $f(4)$

b. $f(5)$

c. $f(10)$