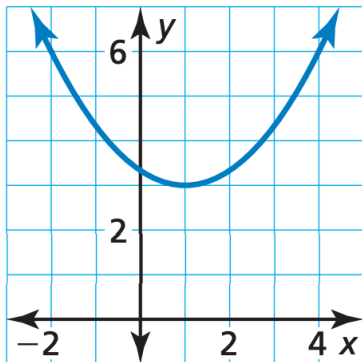


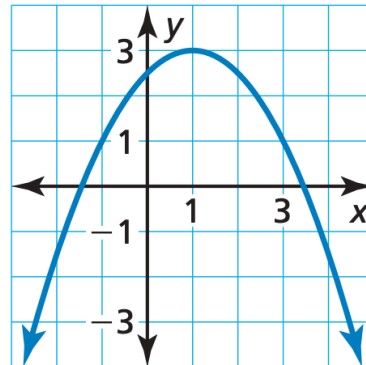
# Homework Week of March 9

1.) Identify the domain and range of the following functions.



Domain \_\_\_\_\_

Range \_\_\_\_\_



Domain \_\_\_\_\_

Range \_\_\_\_\_

2.) Identify the function family to which each function belongs.

$y =  x - 2  + 7$	
$f(x) = -2(x - 4)^2 - 9$	
$y = x + 5$	
$y = x^2 - 64$	

Complete the tables for each equation.

3.)  $y = -3x^2 + 12x + 10$

Direction of opening	
Maximum or minimum	
Axis of symmetry	
Vertex	
y-intercept	
Domain	
Range	

4.)  $f(x) = 2(x + 4)^2 + 5$

Direction of opening	
Maximum or minimum	
Axis of symmetry	
Vertex	
y-intercept	
Domain	
Range	

NAME \_\_\_\_\_ DATE \_\_\_\_\_ PERIOD \_\_\_\_\_

Simplify each polynomial expression.

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

6.)  $(5x + 4)(x - 1) - (3x + 6)$

Factor the polynomial completely.

7.)  $49x^2 - 25$

8.)  $x^2 + 10x + 24$

Solve.

9.)  $y = x^2 + 3x - 28$

10.)  $y = 2x^2 + x - 10$

Rewrite the following equations into vertex form. Then identify the vertex.

11.)  $y = x^2 + 10x + 15$

12.)  $y = 2x^2 - 12x + 22$

13.) The path of a rocket is given by the equation,  $h(t) = -3t^2 + 30t + 73$ , where  $h$  is the height in meters and  $t$  is the time in seconds.

What is the maximum height of the rocket? \_\_\_\_\_

At what time does the rocket reach its maximum height? \_\_\_\_\_