

Quadratic Function Introduction Worksheet

$$f(x) = ax^2$$

Complete the following table of values and plot each function on the same Cartesian plane.

$f(x) = x^2$	
x	y
-5	
-4	
-3	
-2	
-1	
0	
1	
2	
3	
4	
5	

$g(x) = 2x^2$	
x	y
-5	
-4	
-3	
-2	
-1	
0	
1	
2	
3	
4	
5	

$h(x) = \frac{1}{2}x^2$	
x	y
-5	
-4	
-3	
-2	
-1	
0	
1	
2	
3	
4	
5	

$j(x) = -x^2$	
x	y
-5	
-4	
-3	
-2	
-1	
0	
1	
2	
3	
4	
5	

$k(x) = -2x^2$	
x	y
-5	
-4	
-3	
-2	
-1	
0	
1	
2	
3	
4	
5	

$p(x) = -\frac{1}{2}x^2$	
x	y
-5	
-4	
-3	
-2	
-1	
0	
1	
2	
3	
4	
5	

Quadratic Function Introduction Worksheet

$$f(x) = ax^2 + k$$

Complete the following table of values and plot each function a Cartesian plane. Record the translation of the Vertex from the original function $f(x) = x^2$

$f(x) = x^2$	
x	y
-5	
-4	
-3	
-2	
-1	
0	
1	
2	
3	
4	
5	

$g(x) = x^2 + 1$	
x	y
-5	
-4	
-3	
-2	
-1	
0	
1	
2	
3	
4	
5	

$h(x) = x^2 + 3$	
x	y
-5	
-4	
-3	
-2	
-1	
0	
1	
2	
3	
4	
5	

$j(x) = x^2 + 5$	
x	y
-5	
-4	
-3	
-2	
-1	
0	
1	
2	
3	
4	
5	

$k(x) = x^2 - 3$	
x	y
-5	
-4	
-3	
-2	
-1	
0	
1	
2	
3	
4	
5	

$p(x) = x^2 - 5$	
x	y
-5	
-4	
-3	
-2	
-1	
0	
1	
2	
3	
4	
5	

Quadratic Function Introduction Worksheet

$$f(x) = a(x - h)^2$$

Complete the following table of values and plot each function a Cartesian plane. Record the translation of the Vertex from the original function $f(x) = x^2$

$f(x) = x^2$	
x	y
-5	
-4	
-3	
-2	
-1	
0	
1	
2	
3	
4	
5	

$g(x) = (x - 1)^2$	
x	y
-5	
-4	
-3	
-2	
-1	
0	
1	
2	
3	
4	
5	

$h(x) = (x - 2)^2$	
x	y
-5	
-4	
-3	
-2	
-1	
0	
1	
2	
3	
4	
5	

$j(x) = (x - 3)^2$	
x	y
-5	
-4	
-3	
-2	
-1	
0	
1	
2	
3	
4	
5	

$k(x) = (x + 1)^2$	
x	y
-5	
-4	
-3	
-2	
-1	
0	
1	
2	
3	
4	
5	

$p(x) = (x + 2)^2$	
x	y
-5	
-4	
-3	
-2	
-1	
0	
1	
2	
3	
4	
5	