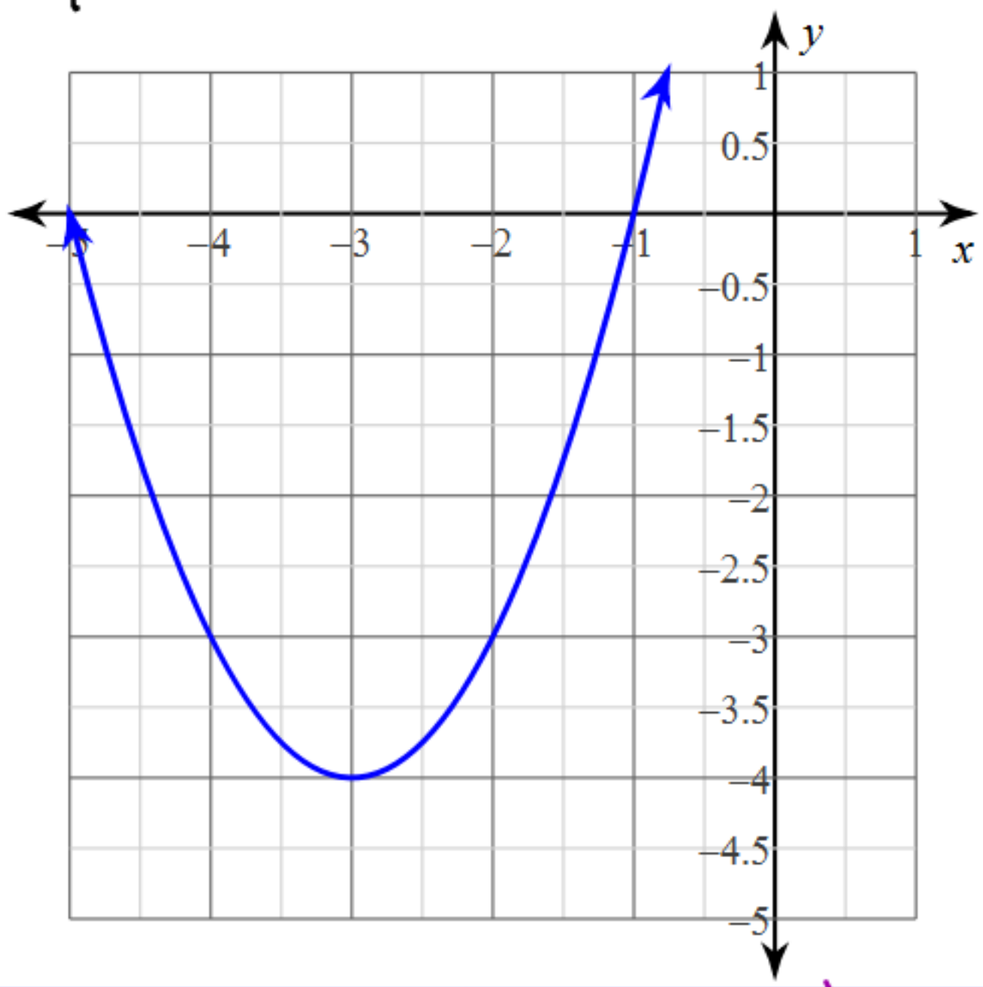
Use the information provided to write the intercept form equation of each parabola.

3) April 28



$y = a(x-5)(x-t)$

$y = a(x+5)(x+1)$

$-4 = a(-3+5)(-3+1)$

$-4 = a(2)(-2)$

$-4 = -4a$

$\frac{-4}{-4} \quad \frac{-4a}{-4}$

$a = 1$

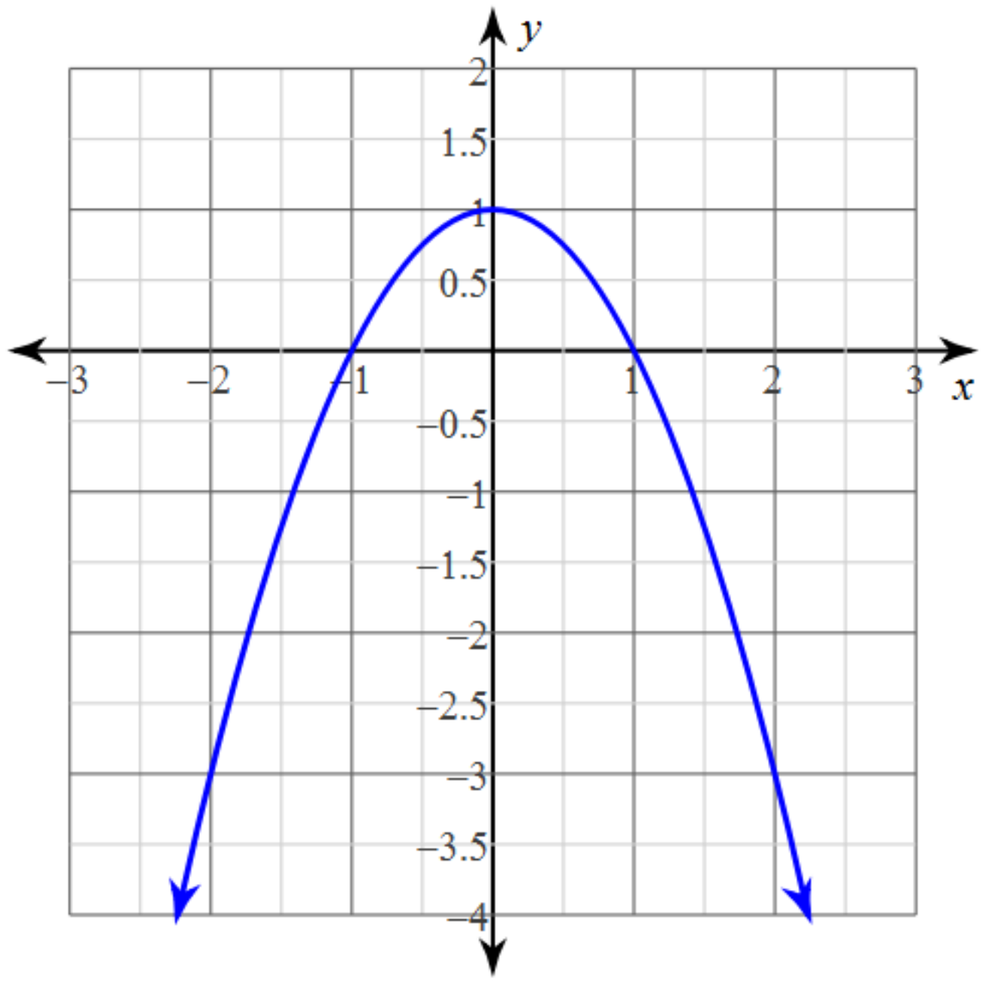
Vertex $(-3, -4)$

zeros $\{-5, -1\}$

$y = 1(x+5)(x+1)$

Use the information provided to write the intercept form equation of each parabola.

5)



$y = a(x-s)(x-t)$

$y = a(x+1)(x-1)$

$1 = a(0+1)(0-1)$

$1 = a(1)(-1)$

$1 = -1a$

$\frac{-1}{-1} \quad \frac{a}{-1}$

$a = -1$

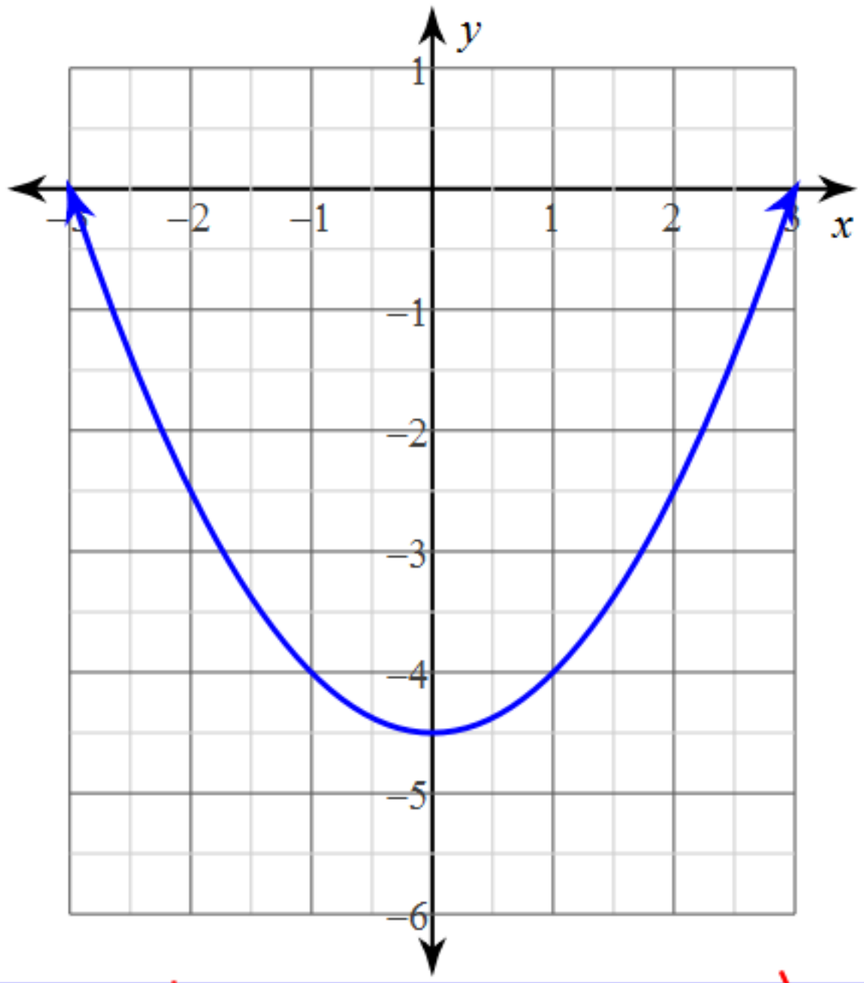
Vertex $(0, 1)$

zeros $\{-1, 1\}$

$y = -(x+1)(x-1)$

Use the information provided to write the intercept form equation of each parabola.

6)



$y = a(x-5)(x-t)$

$y = a(x+3)(x-3)$

$-4.5 = a(0+3)(0-3)$

$-4.5 = a(3)(-3)$

$\frac{-4.5}{-9} = \frac{-9a}{-9}$

$0.5 = a$

$a = \frac{1}{2}$

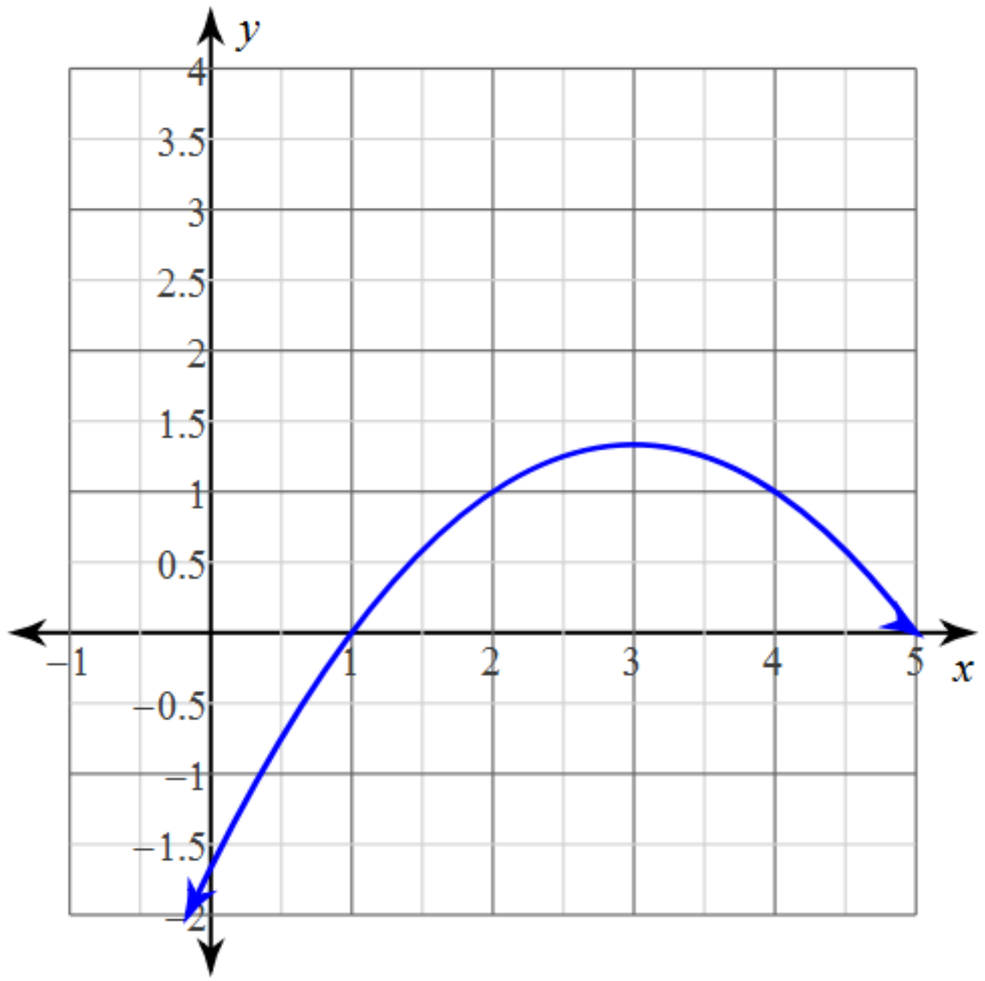
Vertex $(0, -4.5)$

Zeroes $\{-3, 3\}$

$y = \frac{1}{2}(x+3)(x-3)$

Use the information provided to write the intercept form equation of each parabola.

1)

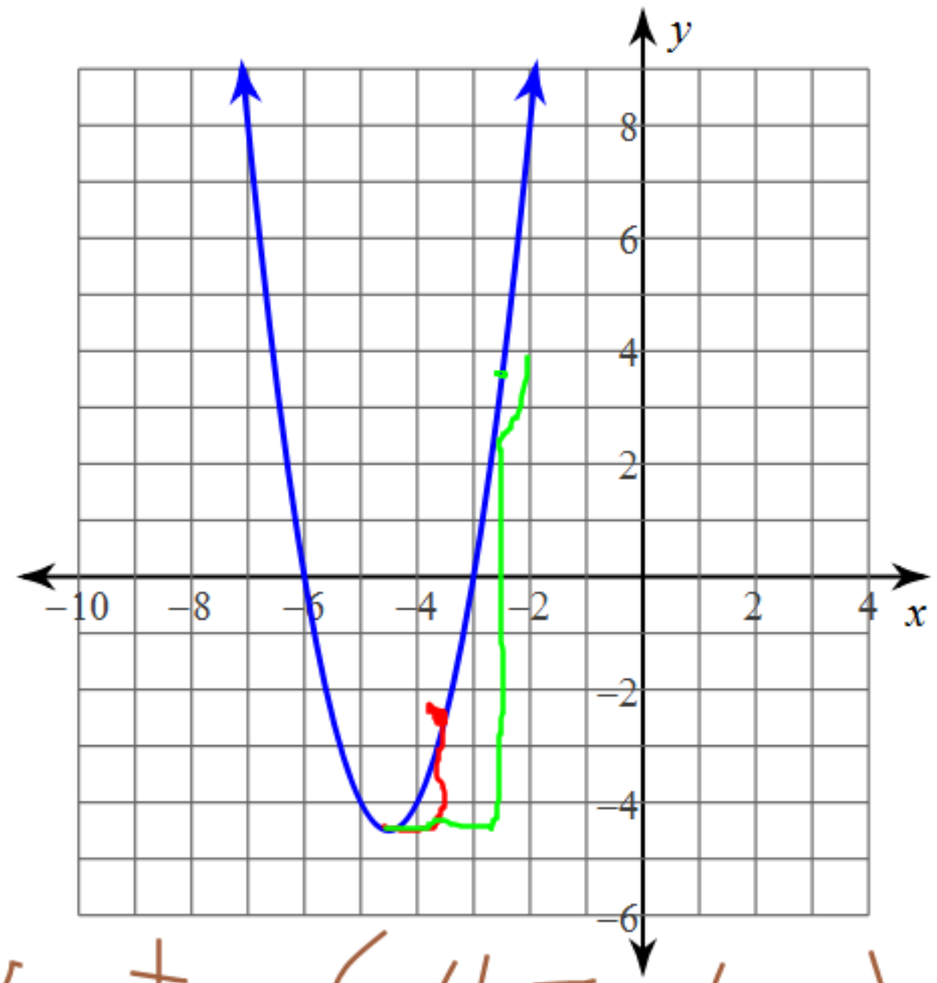


$y = -\frac{1}{3}(x-1)(x-5)$

$S\{1, 5\}$

Use the information provided to write the intercept form equation of each parabola.

2)



$y = a(x+6)(x+3)$

$-4.5 = a(-4.5+6)(-4.5+3)$

$-4.5 = a(1.5)(-1.5)$

$-4.5 = -2.25a$

$\frac{-4.5}{-2.25} = \frac{-2.25a}{-2.25}$

$2 = a$

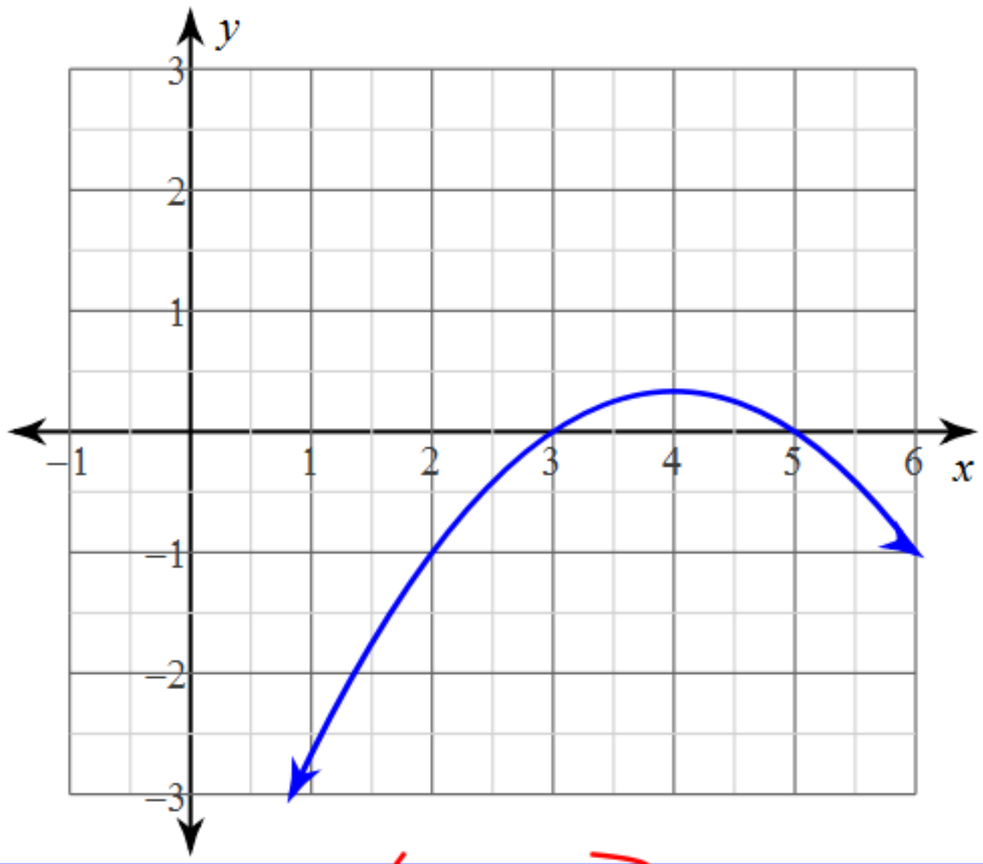
$y = 2(x+6)(x+3)$

Vertex $(-4.5, -4.5)$

SS $\{-6, -3\}$

Use the information provided to write the intercept form equation of each parabola.

4)



$y = a(x-5)(x-t)$

$y = a(x-3)(x-5)$

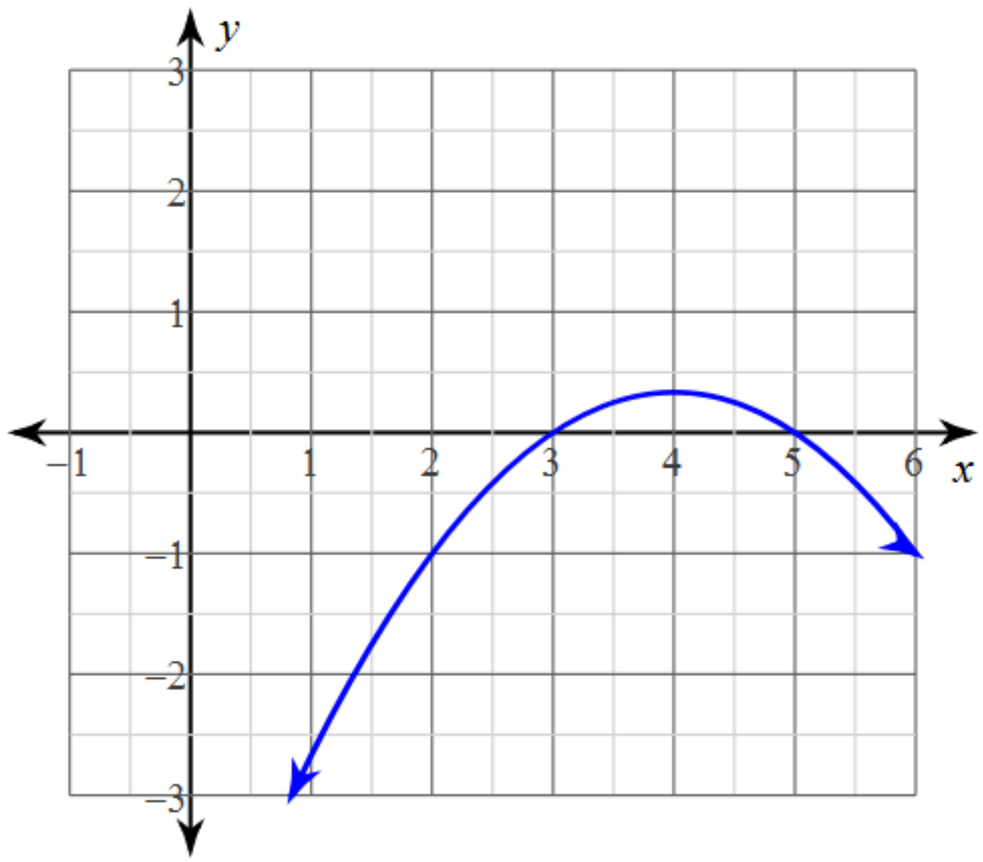
$y = -\frac{1}{3}(x-3)(x-5)$

Zeroes $\{3, 5\}$

vertex $(4, 0.3)$

Use the information provided to write the intercept form equation of each parabola.

4)



$$y = -\frac{1}{3}(x-5)(x-3)$$

Glossary: Quadratic Functions

Definition and diagram for the following:

Parabola of $y = x^2$

Axis of symmetry $x = 0$

Vertex of a parabola $(0,0)$

Zeros of a parabola Where it crosses x-axis

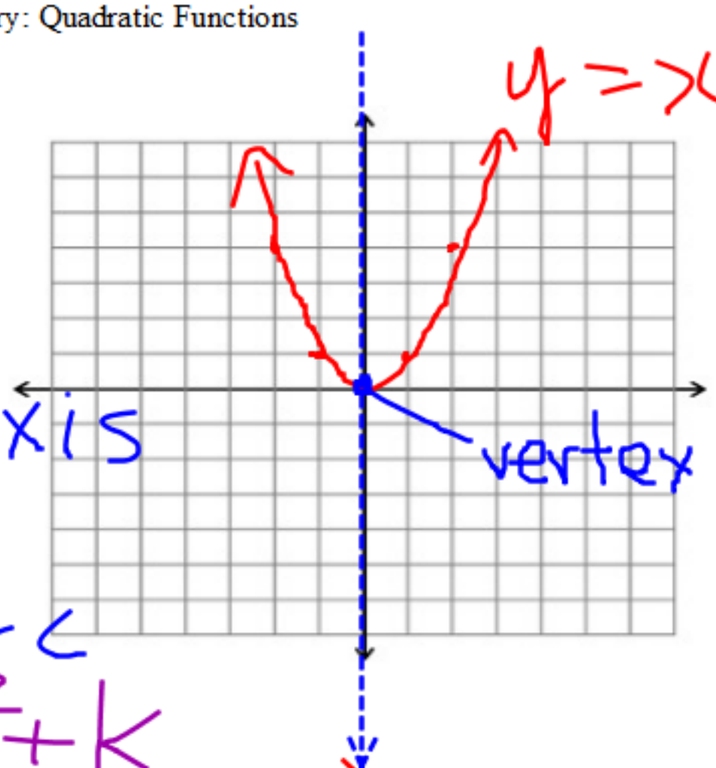
Y-intercept where it crosses the y-axis

Standard form of a Quadratic Equation $y = ax^2 + bx + c$

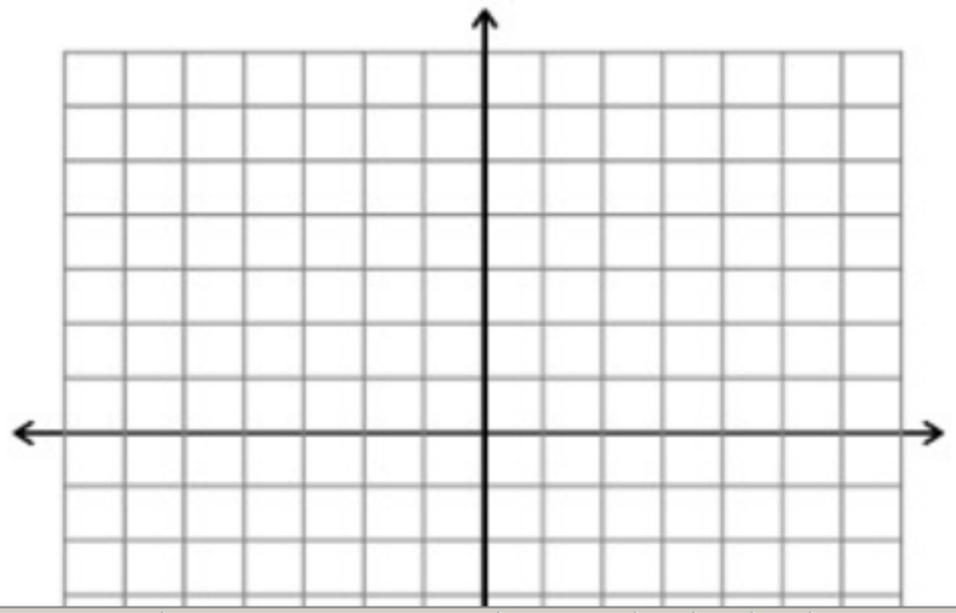
Vertex form of the Quadratic Equation $y = a(x-h)^2 + k$

Zeros Form of the Quadratic Equation $y = a(x-s)(x-t)$

Show and explain a stretch and a compression of the parabola's shape, a horizontal shift to the right or the left, a vertical shift up or down, opening upwards or downwards.



x	y
2	4
1	1
0	0
-1	1
-2	4



Vertex of a parabola

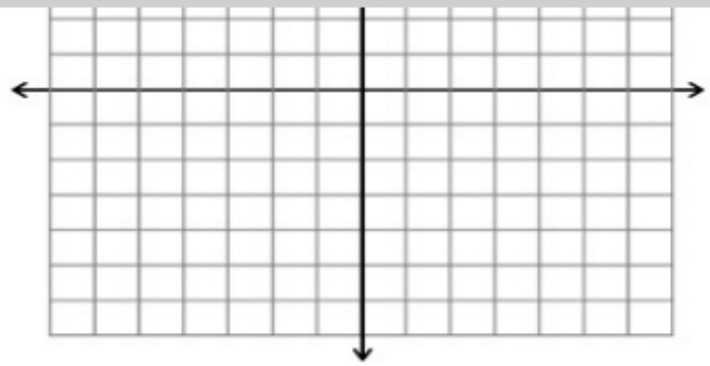
Zeros of a parabola

Y-intercept

Standard form of a Quadratic Equation

Vertex form of the Quadratic Equation

Zeros Form of the Quadratic Equation

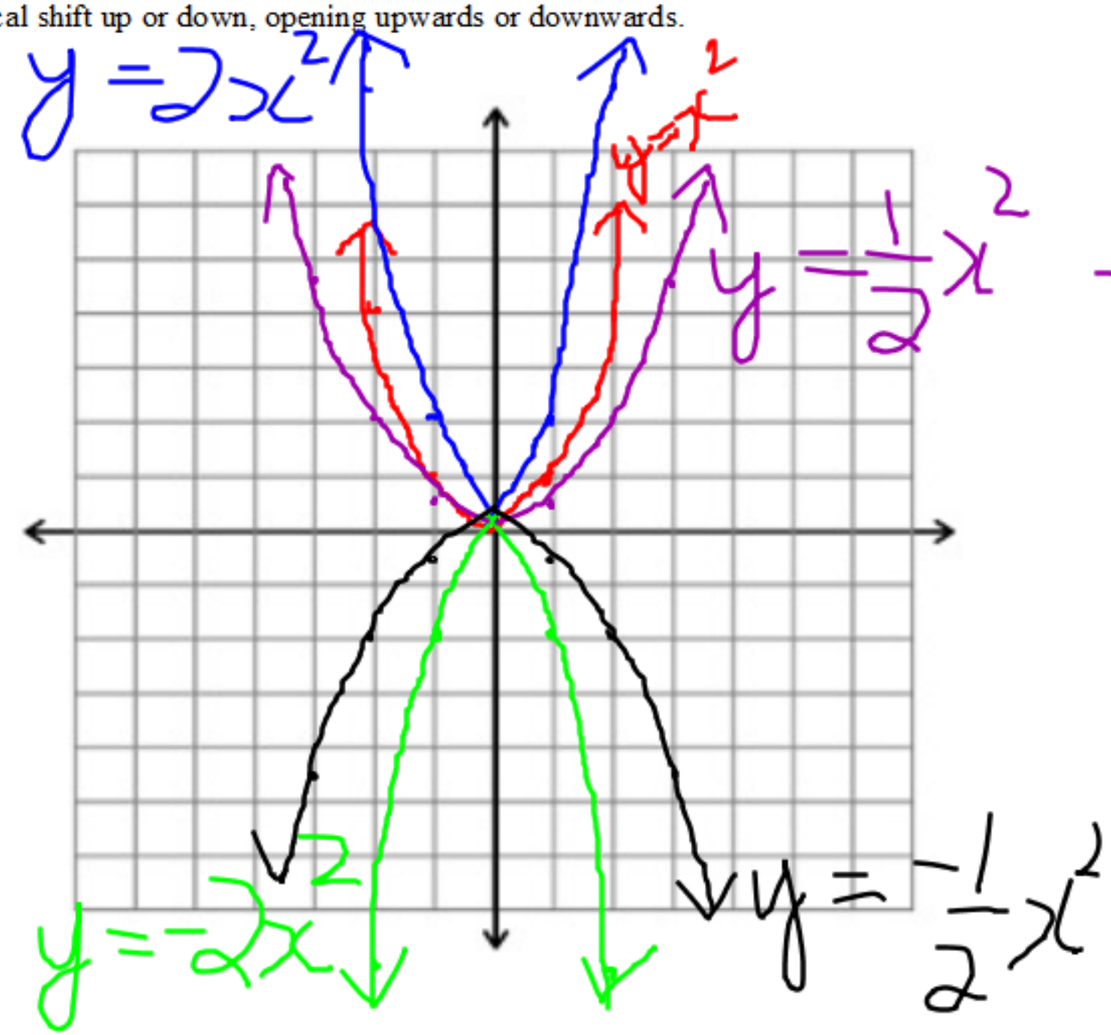


Show and explain a stretch and a compression of the parabola's shape, a horizontal shift to the right or the left, a vertical shift up or down, opening upwards or downwards.

$y = 2x^2$

x	y
2	8
1	2
0	0
-1	2
-2	8

twice as skinny



$y = \frac{1}{2}x^2$

x	y
3	4.5
2	2
1	0.5
0	0
-1	0.5
-2	2
-3	4.5