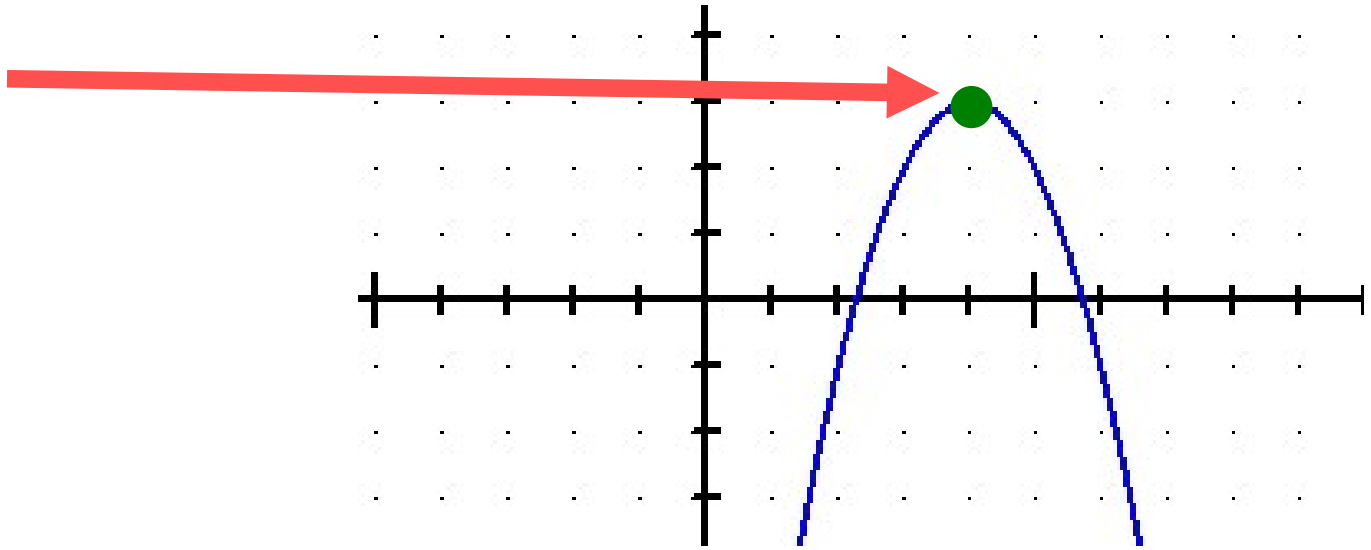
Vertex

TRUTH

The Vertex of a Parabola is the turning point of the graph, splitting the graph in half.

Vertex

(4,3)



Knowing the Vertex tells us <u>where to begin</u> our table and graph.

Parabolas PRACTICE

Make a Table for the Quadratic.

1) $y = x^2 - 4x - 12$

$Vertex: (2, \_\_\_\_)$

x	-2	-1	0	1	2	3	4	5	6
y									

Vertex

TRUTH

To find the center of the table, which is the *x*-coordinate of the Vertex:

$$x = \frac{-(B)}{2A}$$

also known as

the axis of symmetry

Find the *y*-coordinate by plugging the *x* into the original equation.

$$y = Ax^2 + Bx + C$$

Vertex

Example

Find the Vertex of each Quadratic.

A) $y = x^2 + 6x - 3$

B) $y = -2x^2 - 8x + 7$

C) $y = 3x^2 - 12x - 1$

Parabolas PRACTICE

Make a Table for the Quadratic.

2) $y = -x^2 - 2x + 15$

Find Vertex

x	-5	-4	-3	-2	-1	0	1	2	3
y					4				

Parabolas PRACTICE

Make a Table for the Quadratic.

3) $y = x^2 + 2x - 8$

Find Vertex

x									
y									

Parabolas PRACTICE

Make a Table for the Quadratic.

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

Find Vertex

x									
y									