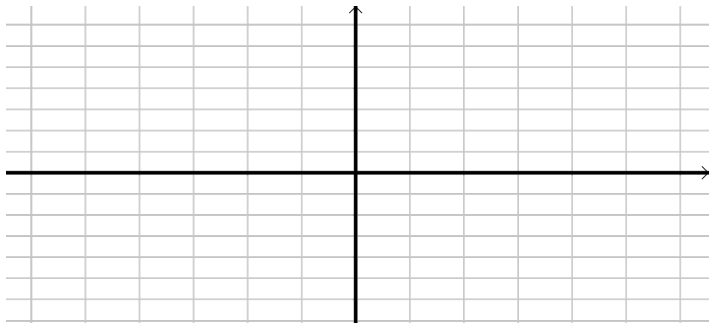


## Graphing Quadratic Equations with 2 variable - Example 1

## Graphing Quadratic Equations with 2 variable - Example 1

**Example:** Sketch the graph of:

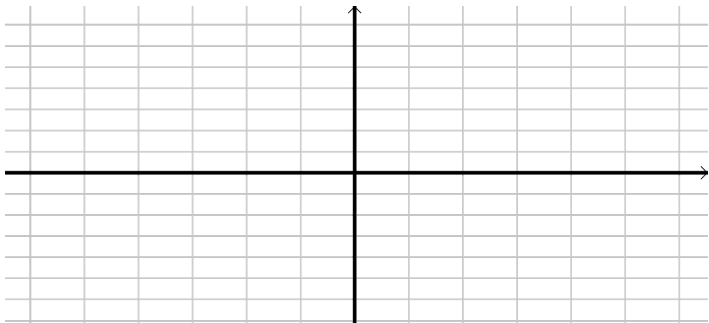
$$y = f(x) = x^2 - 6x + 5$$



## Graphing Quadratic Equations with 2 variable - Example 1

**Example:** Sketch the graph of:

$$y = f(x) = x^2 - 6x + 5$$

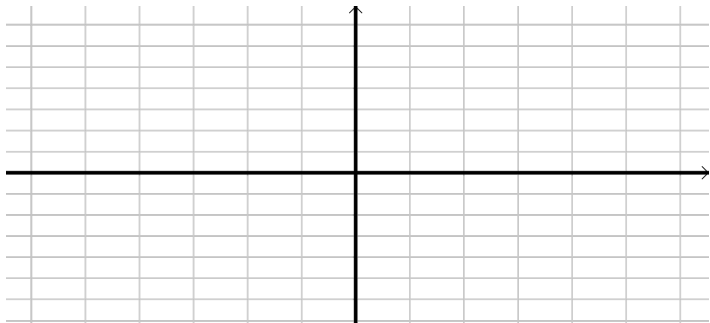


To graph a quadratic, we need to find the important points:

## Graphing Quadratic Equations with 2 variable - Example 1

**Example:** Sketch the graph of:

$$y = f(x) = x^2 - 6x + 5$$



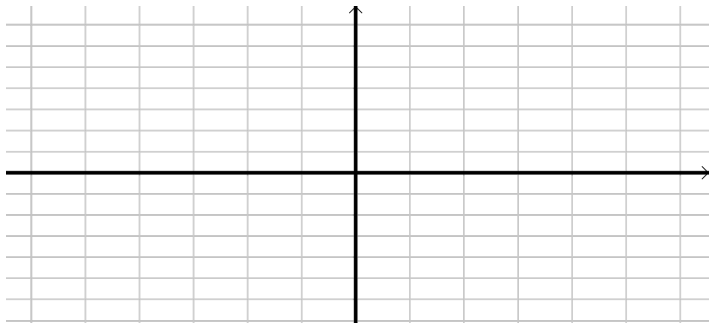
To graph a quadratic, we need to find the important points:

$y$ -int

# Graphing Quadratic Equations with 2 variable - Example 1

**Example:** Sketch the graph of:

$$y = f(x) = x^2 - 6x + 5$$



To graph a quadratic, we need to find the important points:

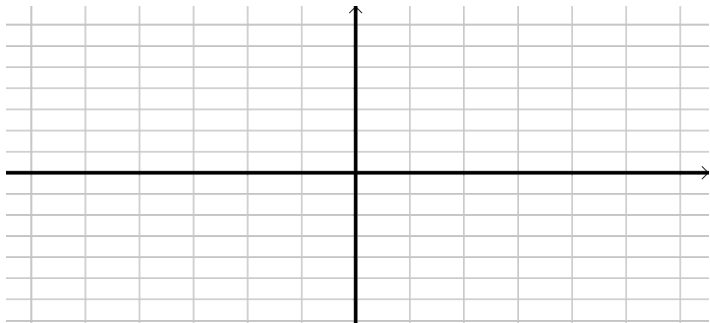
$y$ -int

$x$ -int

# Graphing Quadratic Equations with 2 variable - Example 1

**Example:** Sketch the graph of:

$$y = f(x) = x^2 - 6x + 5$$



To graph a quadratic, we need to find the important points:

y-int

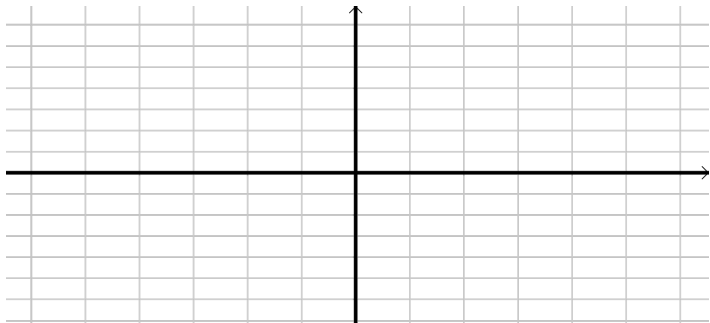
x-int

vertex

# Graphing Quadratic Equations with 2 variable - Example 1

**Example:** Sketch the graph of:

$$y = f(x) = x^2 - 6x + 5$$



To graph a quadratic, we need to find the important points:

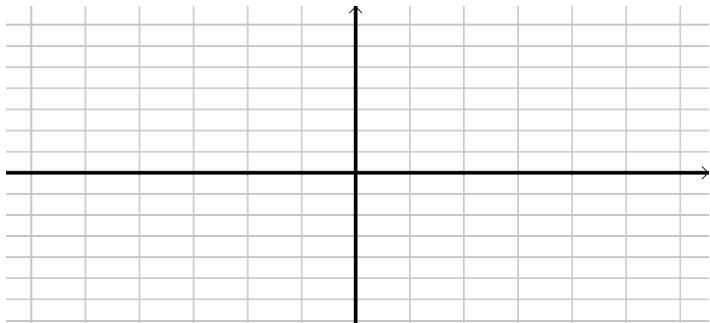
$y$ -int  
 $x = 0$   
vertex

$x$ -int

# Graphing Quadratic Equations with 2 variable - Example 1

**Example:** Sketch the graph of:

$$y = f(x) = x^2 - 6x + 5$$



To graph a quadratic, we need to find the important points:

y-int

$$x = 0 \Rightarrow y = 0^2 - 6 \cdot 0 + 5$$

vertex

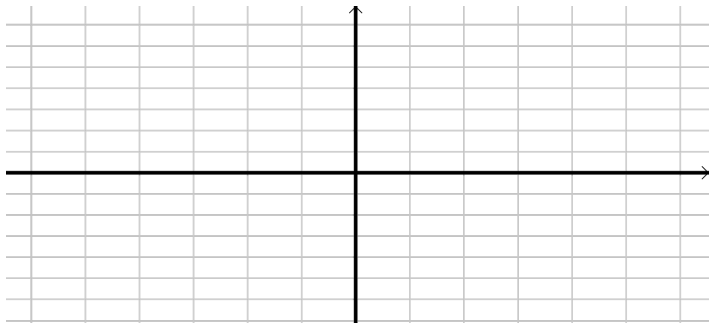
x-int



# Graphing Quadratic Equations with 2 variable - Example 1

**Example:** Sketch the graph of:

$$y = f(x) = x^2 - 6x + 5$$



To graph a quadratic, we need to find the important points:

y-int

$$x = 0 \Rightarrow y = 0^2 - 6 \cdot 0 + 5 = 5$$

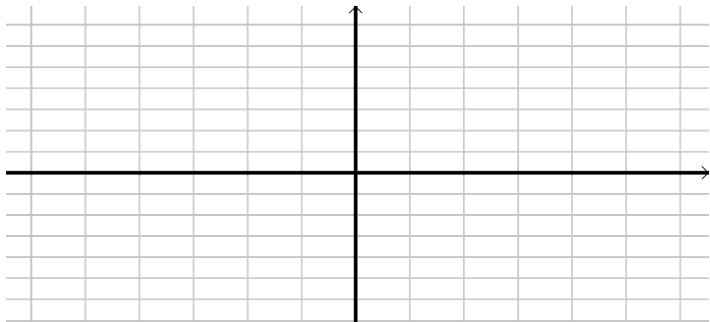
vertex

x-int

# Graphing Quadratic Equations with 2 variable - Example 1

**Example:** Sketch the graph of:

$$y = f(x) = x^2 - 6x + 5$$



To graph a quadratic, we need to find the important points:

$y$ -int:  $(0, 5)$

$x$ -int

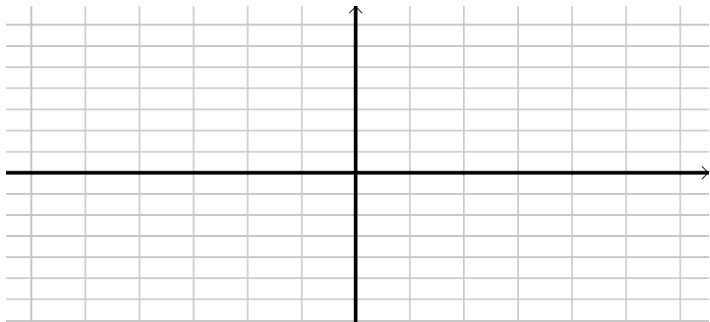
$$x = 0 \Rightarrow y = 0^2 - 6 \cdot 0 + 5 = 5$$

vertex

# Graphing Quadratic Equations with 2 variable - Example 1

**Example:** Sketch the graph of:

$$y = f(x) = x^2 - 6x + 5$$



To graph a quadratic, we need to find the important points:

$y$ -int:  $(0, 5)$

$$x = 0 \Rightarrow y = 0^2 - 6 \cdot 0 + 5 = 5$$

vertex

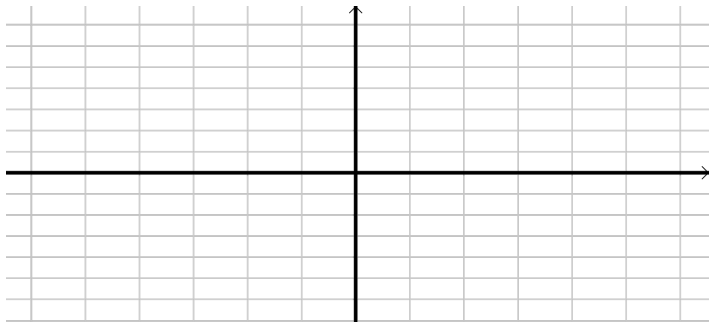
$x$ -int

$$y = 0$$

# Graphing Quadratic Equations with 2 variable - Example 1

**Example:** Sketch the graph of:

$$y = f(x) = x^2 - 6x + 5$$



To graph a quadratic, we need to find the important points:

**y-int:** (0, 5)

$$x = 0 \Rightarrow y = 0^2 - 6 \cdot 0 + 5 = 5$$

**vertex**

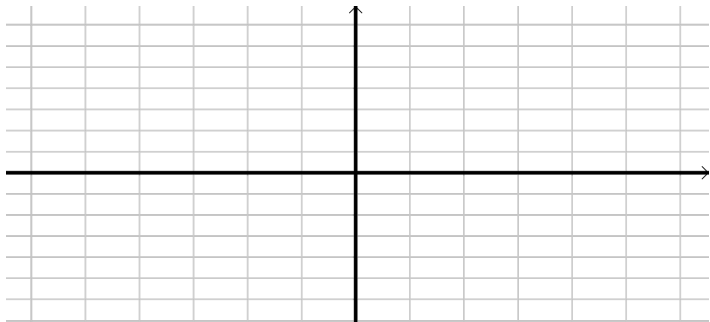
**x-int**

$$y = 0 \Rightarrow 0 = x^2 - 6x + 5$$

# Graphing Quadratic Equations with 2 variable - Example 1

**Example:** Sketch the graph of:

$$y = f(x) = x^2 - 6x + 5$$



To graph a quadratic, we need to find the important points:

**y-int:** (0, 5)

$$x = 0 \Rightarrow y = 0^2 - 6 \cdot 0 + 5 = 5$$

**vertex**

**x-int**

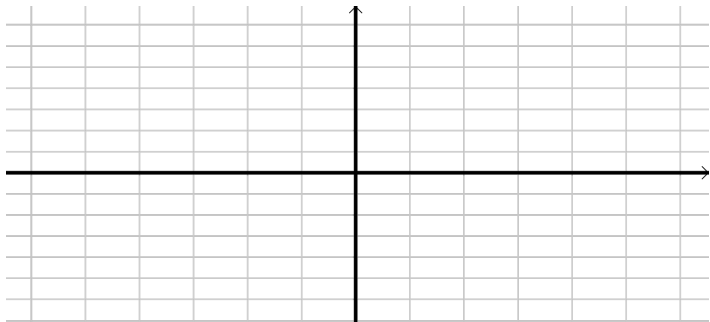
$$y = 0 \Rightarrow 0 = x^2 - 6x + 5$$

How do we solve this?

# Graphing Quadratic Equations with 2 variable - Example 1

**Example:** Sketch the graph of:

$$y = f(x) = x^2 - 6x + 5$$



To graph a quadratic, we need to find the important points:

**y-int:** (0, 5)

$$x = 0 \Rightarrow y = 0^2 - 6 \cdot 0 + 5 = 5$$

**vertex**

**x-int**

$$y = 0 \Rightarrow 0 = x^2 - 6x + 5$$

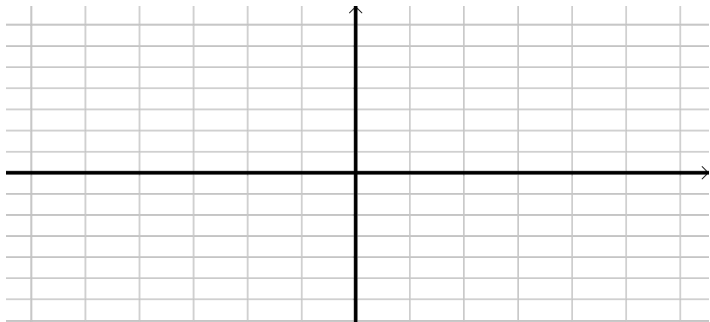
How do we solve this?

Using the

# Graphing Quadratic Equations with 2 variable - Example 1

**Example:** Sketch the graph of:

$$y = f(x) = x^2 - 6x + 5$$



To graph a quadratic, we need to find the important points:

**y-int:**  $(0, 5)$

$$x = 0 \Rightarrow y = 0^2 - 6 \cdot 0 + 5 = 5$$

**vertex**

**x-int**

$$y = 0 \Rightarrow 0 = x^2 - 6x + 5$$

How do we solve this?

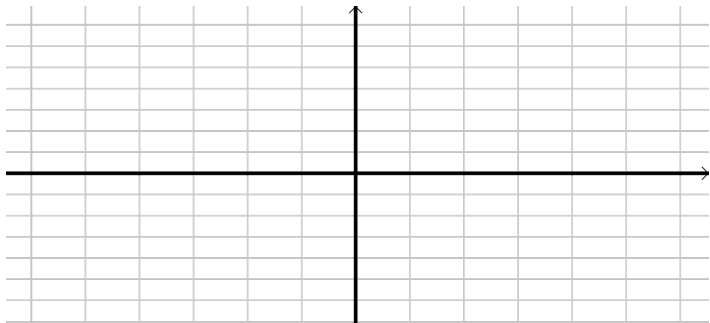
Using the

$$r_1, r_2 = 1, 5$$

# Graphing Quadratic Equations with 2 variable - Example 1

**Example:** Sketch the graph of:

$$y = f(x) = x^2 - 6x + 5$$



To graph a quadratic, we need to find the important points:

$y$ -int:  $(0, 5)$

$$x = 0 \Rightarrow y = 0^2 - 6 \cdot 0 + 5 = 5$$

vertex

$x$ -int:  $(1, 0), (5, 0)$

$$y = 0 \Rightarrow 0 = x^2 - 6x + 5$$

How do we solve this?

Using the

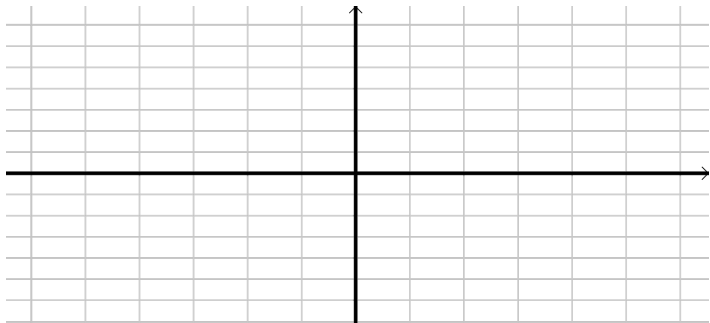
$$r_1, r_2 = 1, 5$$



# Graphing Quadratic Equations with 2 variable - Example 1

**Example:** Sketch the graph of:

$$y = f(x) = x^2 - 6x + 5$$



To graph a quadratic, we need to find the important points:

**y-int:**  $(0, 5)$

$$x = 0 \Rightarrow y = 0^2 - 6 \cdot 0 + 5 = 5$$

**vertex**

**$h$**

**x-int:**  $(1, 0), (5, 0)$

$$y = 0 \Rightarrow 0 = x^2 - 6x + 5$$

How do we solve this?

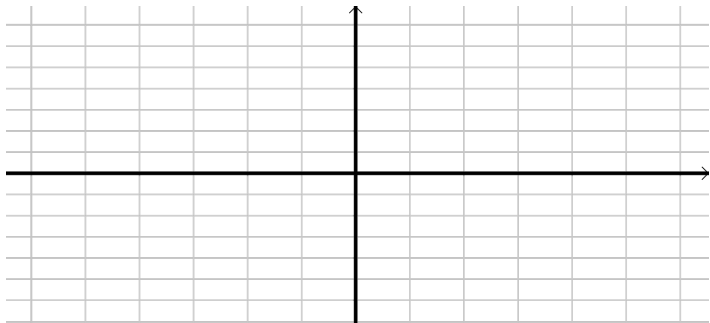
Using the

$$r_1, r_2 = 1, 5$$

# Graphing Quadratic Equations with 2 variable - Example 1

**Example:** Sketch the graph of:

$$y = f(x) = x^2 - 6x + 5$$



To graph a quadratic, we need to find the important points:

**y-int:**  $(0, 5)$

$$x = 0 \Rightarrow y = 0^2 - 6 \cdot 0 + 5 = 5$$

**vertex**

$$h = \frac{-b}{2a}$$

**x-int:**  $(1, 0), (5, 0)$

$$y = 0 \Rightarrow 0 = x^2 - 6x + 5$$

How do we solve this?

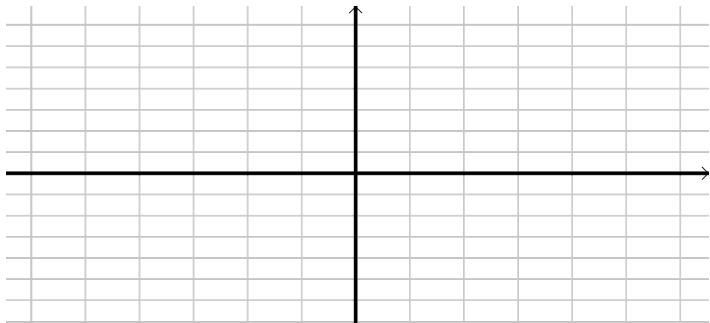
Using the

$$r_1, r_2 = 1, 5$$

# Graphing Quadratic Equations with 2 variable - Example 1

**Example:** Sketch the graph of:

$$y = f(x) = x^2 - 6x + 5$$



To graph a quadratic, we need to find the important points:

**y-int:**  $(0, 5)$

$$x = 0 \Rightarrow y = 0^2 - 6 \cdot 0 + 5 = 5$$

**vertex**

$$h = \frac{-b}{2a} = \frac{-(-6)}{2 \cdot 1}$$

**x-int:**  $(1, 0), (5, 0)$

$$y = 0 \Rightarrow 0 = x^2 - 6x + 5$$

How do we solve this?

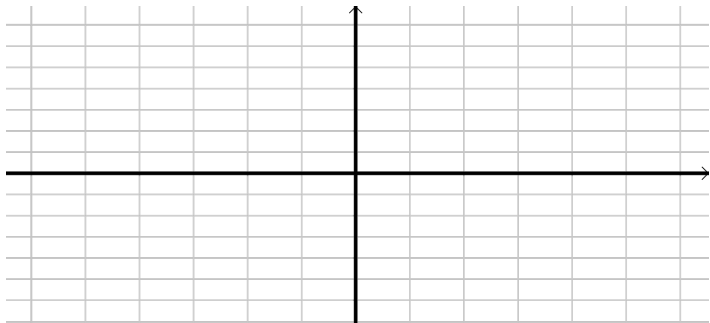
Using the

$$r_1, r_2 = 1, 5$$

# Graphing Quadratic Equations with 2 variable - Example 1

**Example:** Sketch the graph of:

$$y = f(x) = x^2 - 6x + 5$$



To graph a quadratic, we need to find the important points:

$y$ -int:  $(0, 5)$

$$x = 0 \Rightarrow y = 0^2 - 6 \cdot 0 + 5 = 5$$

vertex

$$h = \frac{-b}{2a} = \frac{-(-6)}{2 \cdot 1} = 3$$

$x$ -int:  $(1, 0), (5, 0)$

$$y = 0 \Rightarrow 0 = x^2 - 6x + 5$$

How do we solve this?

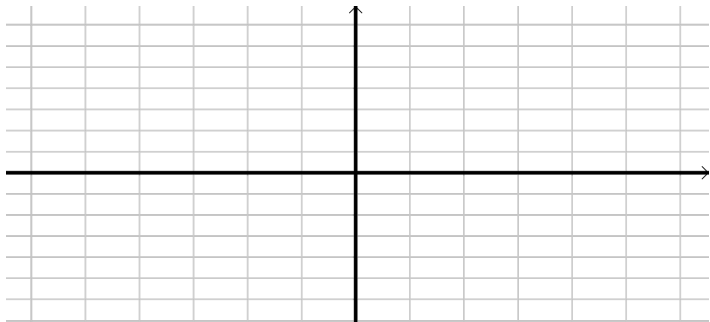
Using the

$$r_1, r_2 = 1, 5$$

# Graphing Quadratic Equations with 2 variable - Example 1

**Example:** Sketch the graph of:

$$y = f(x) = x^2 - 6x + 5$$



To graph a quadratic, we need to find the important points:

**y-int:**  $(0, 5)$

$$x = 0 \Rightarrow y = 0^2 - 6 \cdot 0 + 5 = 5$$

**vertex**

$$h = \frac{-b}{2a} = \frac{-(-6)}{2 \cdot 1} = 3$$

**k**

**x-int:**  $(1, 0), (5, 0)$

$$y = 0 \Rightarrow 0 = x^2 - 6x + 5$$

How do we solve this?

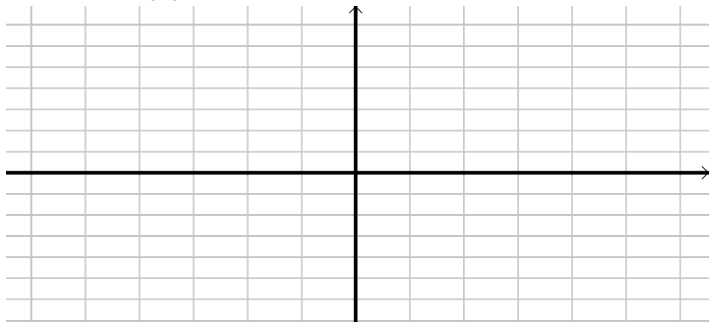
Using the

$$r_1, r_2 = 1, 5$$

# Graphing Quadratic Equations with 2 variable - Example 1

**Example:** Sketch the graph of:

$$y = f(x) = x^2 - 6x + 5$$



To graph a quadratic, we need to find the important points:

**y-int:**  $(0, 5)$

$$x = 0 \Rightarrow y = 0^2 - 6 \cdot 0 + 5 = 5$$

**vertex**

$$h = \frac{-b}{2a} = \frac{-(-6)}{2 \cdot 1} = 3$$

$$k = f(h)$$

**x-int:**  $(1, 0), (5, 0)$

$$y = 0 \Rightarrow 0 = x^2 - 6x + 5$$

How do we solve this?

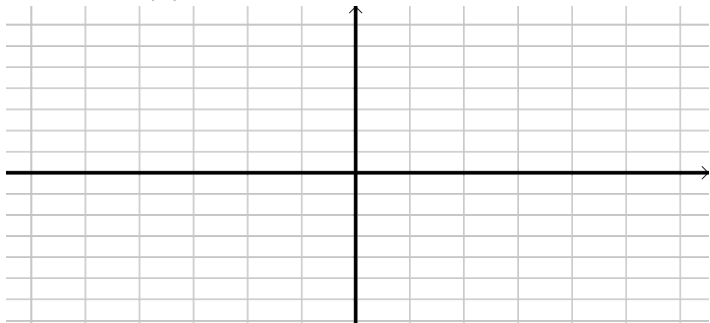
Using the

$$r_1, r_2 = 1, 5$$

# Graphing Quadratic Equations with 2 variable - Example 1

**Example:** Sketch the graph of:

$$y = f(x) = x^2 - 6x + 5$$



To graph a quadratic, we need to find the important points:

**y-int:**  $(0, 5)$

$$x = 0 \Rightarrow y = 0^2 - 6 \cdot 0 + 5 = 5$$

**vertex**

$$h = \frac{-b}{2a} = \frac{-(-6)}{2 \cdot 1} = 3$$

$$k = f(h) = f(3)$$

**x-int:**  $(1, 0), (5, 0)$

$$y = 0 \Rightarrow 0 = x^2 - 6x + 5$$

How do we solve this?

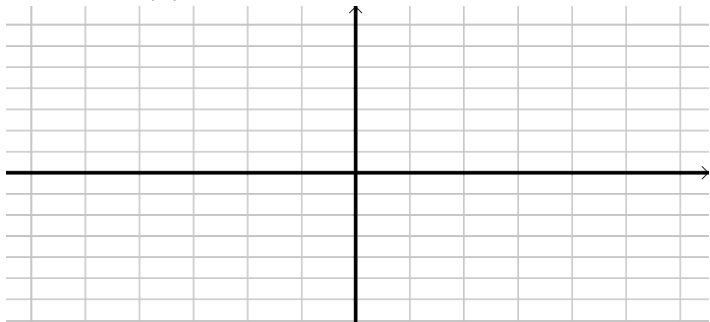
Using the

$$r_1, r_2 = 1, 5$$

# Graphing Quadratic Equations with 2 variable - Example 1

**Example:** Sketch the graph of:

$$y = f(x) = x^2 - 6x + 5$$



To graph a quadratic, we need to find the important points:

**y-int:**  $(0, 5)$

$$x = 0 \Rightarrow y = 0^2 - 6 \cdot 0 + 5 = 5$$

**vertex**

$$h = \frac{-b}{2a} = \frac{-(-6)}{2 \cdot 1} = 3$$

$$k = f(h) = f(3) = -4$$

**x-int:**  $(1, 0), (5, 0)$

$$y = 0 \Rightarrow 0 = x^2 - 6x + 5$$

How do we solve this?

Using the

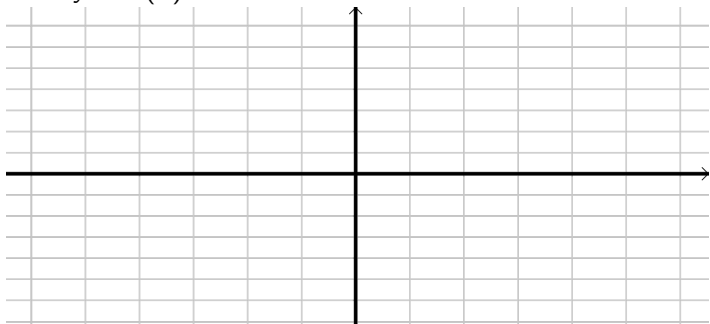
$$r_1, r_2 = 1, 5$$



# Graphing Quadratic Equations with 2 variable - Example 1

**Example:** Sketch the graph of:

$$y = f(x) = x^2 - 6x + 5$$



To graph a quadratic, we need to find the important points:

**y-int:**  $(0, 5)$

$$x = 0 \Rightarrow y = 0^2 - 6 \cdot 0 + 5 = 5$$

**vertex:**  $(3, -4)$

$$h = \frac{-b}{2a} = \frac{-(-6)}{2 \cdot 1} = 3$$

$$k = f(h) = f(3) = -4$$

**x-int:**  $(1, 0), (5, 0)$

$$y = 0 \Rightarrow 0 = x^2 - 6x + 5$$

How do we solve this?

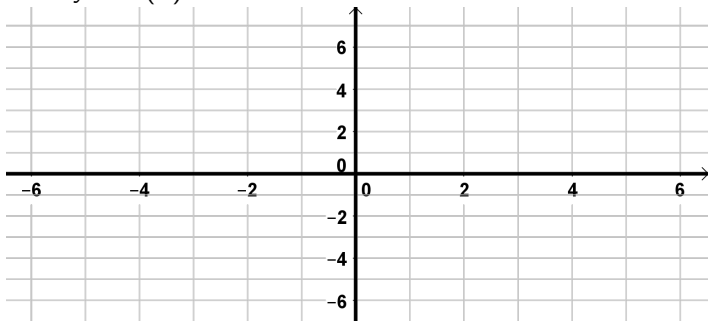
Using the

$$r_1, r_2 = 1, 5$$

# Graphing Quadratic Equations with 2 variable - Example 1

**Example:** Sketch the graph of:

$$y = f(x) = x^2 - 6x + 5$$



To graph a quadratic, we need to find the important points:

**y-int:**  $(0, 5)$

$$x = 0 \Rightarrow y = 0^2 - 6 \cdot 0 + 5 = 5$$

**vertex:**  $(3, -4)$

$$h = \frac{-b}{2a} = \frac{-(-6)}{2 \cdot 1} = 3$$

$$k = f(h) = f(3) = -4$$

**x-int:**  $(1, 0), (5, 0)$

$$y = 0 \Rightarrow 0 = x^2 - 6x + 5$$

How do we solve this?

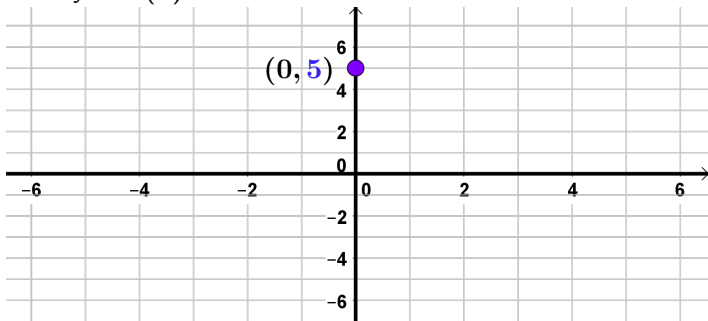
Using the

$$r_1, r_2 = 1, 5$$

# Graphing Quadratic Equations with 2 variable - Example 1

**Example:** Sketch the graph of:

$$y = f(x) = x^2 - 6x + 5$$



To graph a quadratic, we need to find the important points:

**y-int:**  $(0, 5)$

$$x = 0 \Rightarrow y = 0^2 - 6 \cdot 0 + 5 = 5$$

**vertex:**  $(3, -4)$

$$h = \frac{-b}{2a} = \frac{-(-6)}{2 \cdot 1} = 3$$

$$k = f(h) = f(3) = -4$$

**x-int:**  $(1, 0), (5, 0)$

$$y = 0 \Rightarrow 0 = x^2 - 6x + 5$$

How do we solve this?

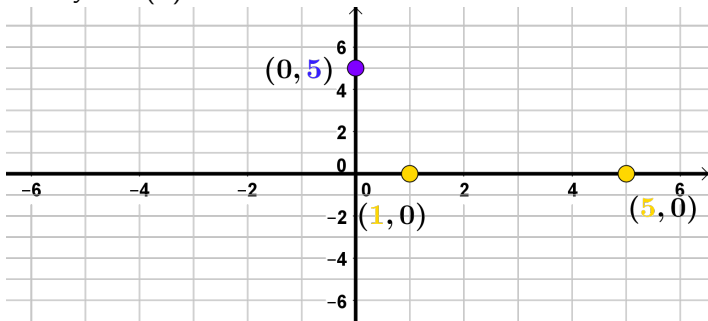
Using the

$$r_1, r_2 = 1, 5$$

# Graphing Quadratic Equations with 2 variable - Example 1

**Example:** Sketch the graph of:

$$y = f(x) = x^2 - 6x + 5$$



To graph a quadratic, we need to find the important points:

**y-int:**  $(0, 5)$

$$x = 0 \Rightarrow y = 0^2 - 6 \cdot 0 + 5 = 5$$

**vertex:**  $(3, -4)$

$$h = \frac{-b}{2a} = \frac{-(-6)}{2 \cdot 1} = 3$$

$$k = f(h) = f(3) = -4$$

**x-int:**  $(1, 0), (5, 0)$

$$y = 0 \Rightarrow 0 = x^2 - 6x + 5$$

How do we solve this?

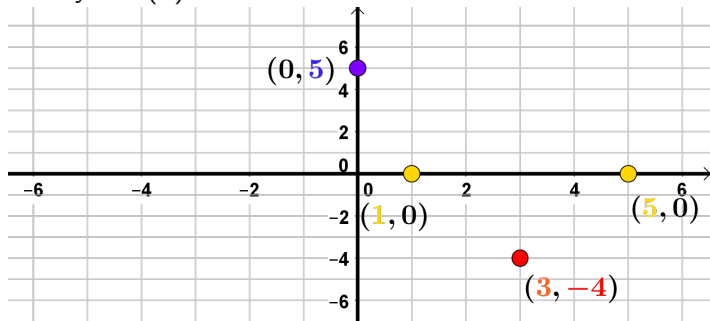
Using the

$$r_1, r_2 = 1, 5$$

# Graphing Quadratic Equations with 2 variable - Example 1

**Example:** Sketch the graph of:

$$y = f(x) = x^2 - 6x + 5$$



To graph a quadratic, we need to find the important points:

**y-int:**  $(0, 5)$

$$x = 0 \Rightarrow y = 0^2 - 6 \cdot 0 + 5 = 5$$

**vertex:**  $(3, -4)$

$$h = \frac{-b}{2a} = \frac{-(-6)}{2 \cdot 1} = 3$$

$$k = f(h) = f(3) = -4$$

**x-int:**  $(1, 0), (5, 0)$

$$y = 0 \Rightarrow 0 = x^2 - 6x + 5$$

How do we solve this?

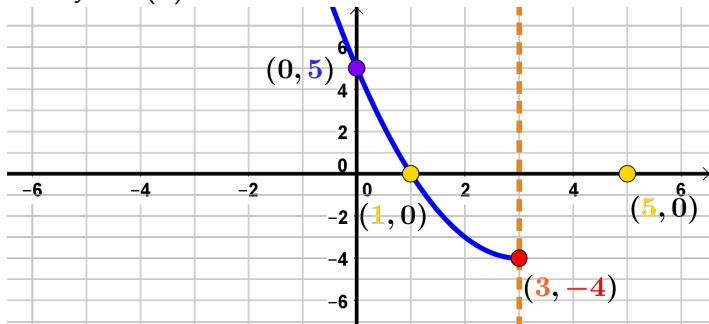
Using the

$$r_1, r_2 = 1, 5$$

# Graphing Quadratic Equations with 2 variable - Example 1

**Example:** Sketch the graph of:

$$y = f(x) = x^2 - 6x + 5$$



To graph a quadratic, we need to find the important points:

**y-int:**  $(0, 5)$

$$x = 0 \Rightarrow y = 0^2 - 6 \cdot 0 + 5 = 5$$

**vertex:**  $(3, -4)$

$$h = \frac{-b}{2a} = \frac{-(-6)}{2 \cdot 1} = 3$$

$$k = f(h) = f(3) = -4$$

**x-int:**  $(1, 0), (5, 0)$

$$y = 0 \Rightarrow 0 = x^2 - 6x + 5$$

How do we solve this?

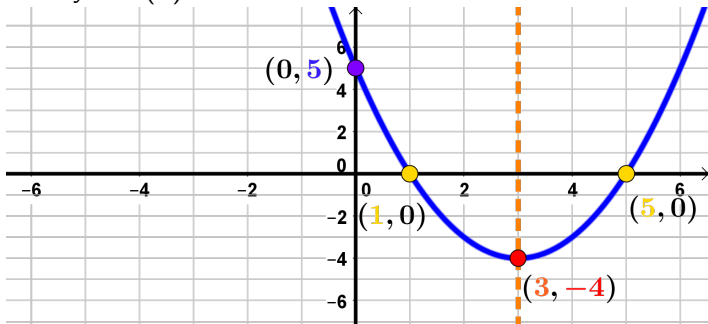
Using the

$$r_1, r_2 = 1, 5$$

# Graphing Quadratic Equations with 2 variable - Example 1

**Example:** Sketch the graph of:

$$y = f(x) = x^2 - 6x + 5$$



To graph a quadratic, we need to find the important points:

**y-int:**  $(0, 5)$

$$x = 0 \Rightarrow y = 0^2 - 6 \cdot 0 + 5 = 5$$

**vertex:**  $(3, -4)$

$$h = \frac{-b}{2a} = \frac{-(-6)}{2 \cdot 1} = 3$$

$$k = f(h) = f(3) = -4$$

**x-int:**  $(1, 0), (5, 0)$

$$y = 0 \Rightarrow 0 = x^2 - 6x + 5$$

How do we solve this?

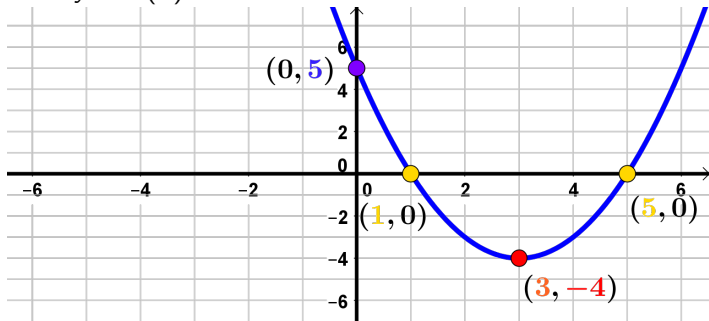
Using the

$$r_1, r_2 = 1, 5$$

# Graphing Quadratic Equations with 2 variable - Example 1

**Example:** Sketch the graph of:

$$y = f(x) = x^2 - 6x + 5$$



To graph a quadratic, we need to find the important points:

**y-int:**  $(0, 5)$

$$x = 0 \Rightarrow y = 0^2 - 6 \cdot 0 + 5 = 5$$

**vertex:**  $(3, -4)$

$$h = \frac{-b}{2a} = \frac{-(-6)}{2 \cdot 1} = 3$$

$$k = f(h) = f(3) = -4$$

**x-int:**  $(1, 0), (5, 0)$

$$y = 0 \Rightarrow 0 = x^2 - 6x + 5$$

How do we solve this?

Using the

$$r_1, r_2 = 1, 5$$