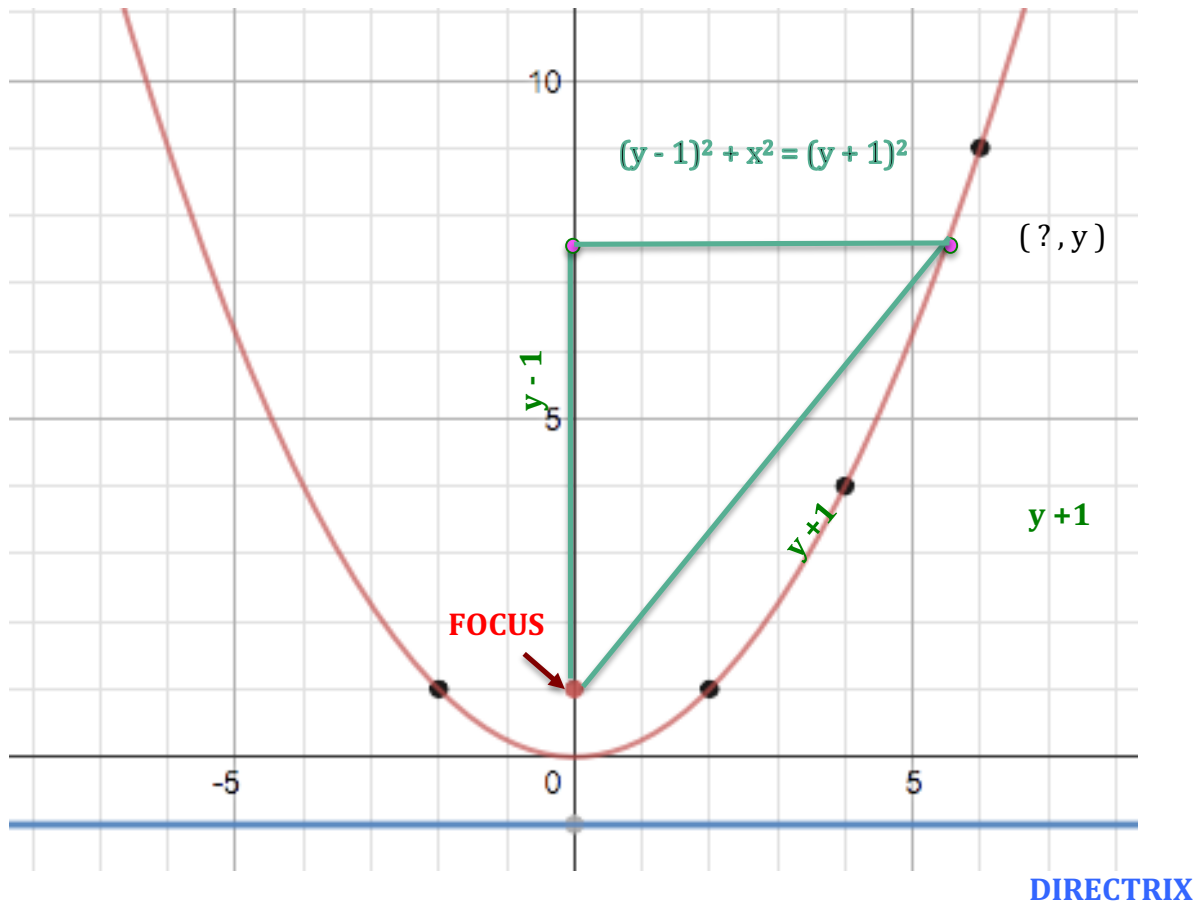---

DEFINITION: A parabola is the set of points that are equal distance from the **focus** and the **directrix**.

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1. Consider the equation $x = \sqrt{4y}$. What is the meaning of the x? Where is it on the graph? What is the meaning of y? Where do you see the y on the graph?

2. What is the purpose of the equation? How would you use it? What does it mean that there are two different variables in the equation?

3. What is the x-value of a point on the parabola with a y-value of 100?

$(y - 1)^2 + x^2 = (y + 1)^2$

$(?, y)$

y - 1

y +1

y +1

FOCUS

-5   0   5

DIRECTRIX

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