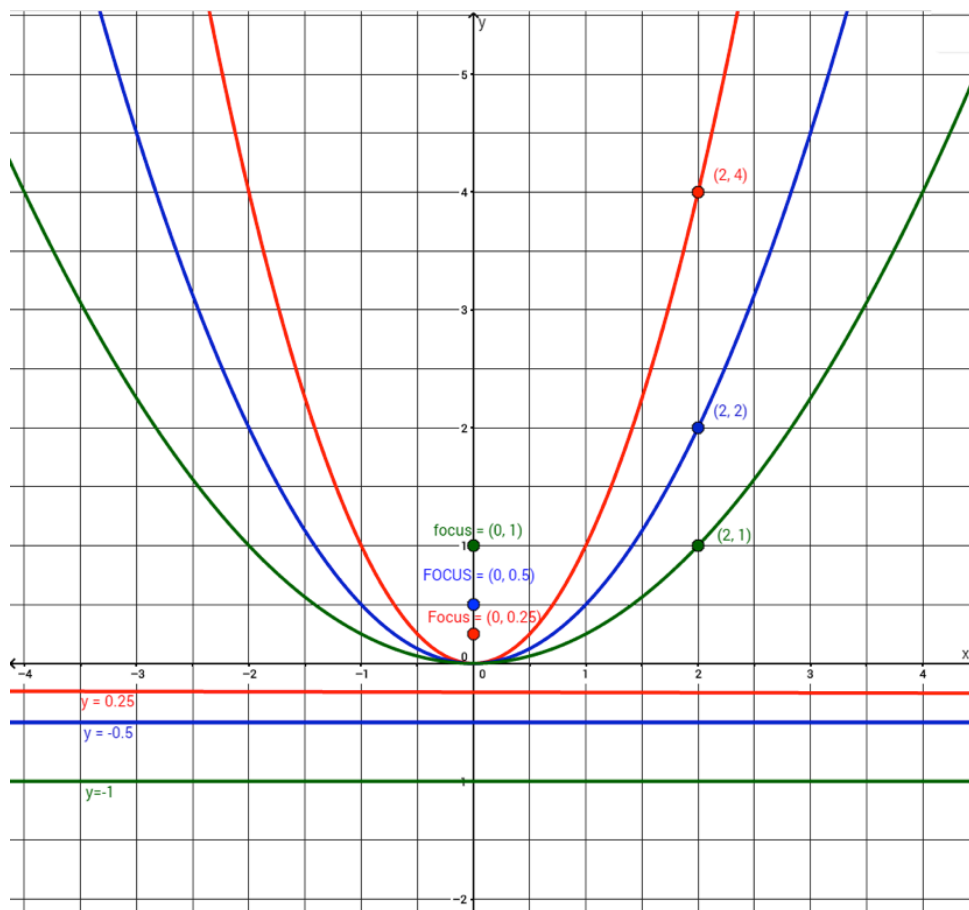


$$\text{General equation for a parabola with a vertex at the origin: } y = \frac{x^2}{4p}$$

Below are the graphs of parabolas for the  $p$ -values of  $\frac{1}{4}$ ,  $\frac{1}{2}$ , and 1 .

1. In the graph below, the labeled points on the parabolas all have the same  $x$ -value. Comparing these points, what do you notice about how the  $x$ -values change as the  $p$ -value increases?
2. Using the labeled points on the parabola in your argument, justify your claim about how the  $x$ -values change as the  $p$ -value increases.



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