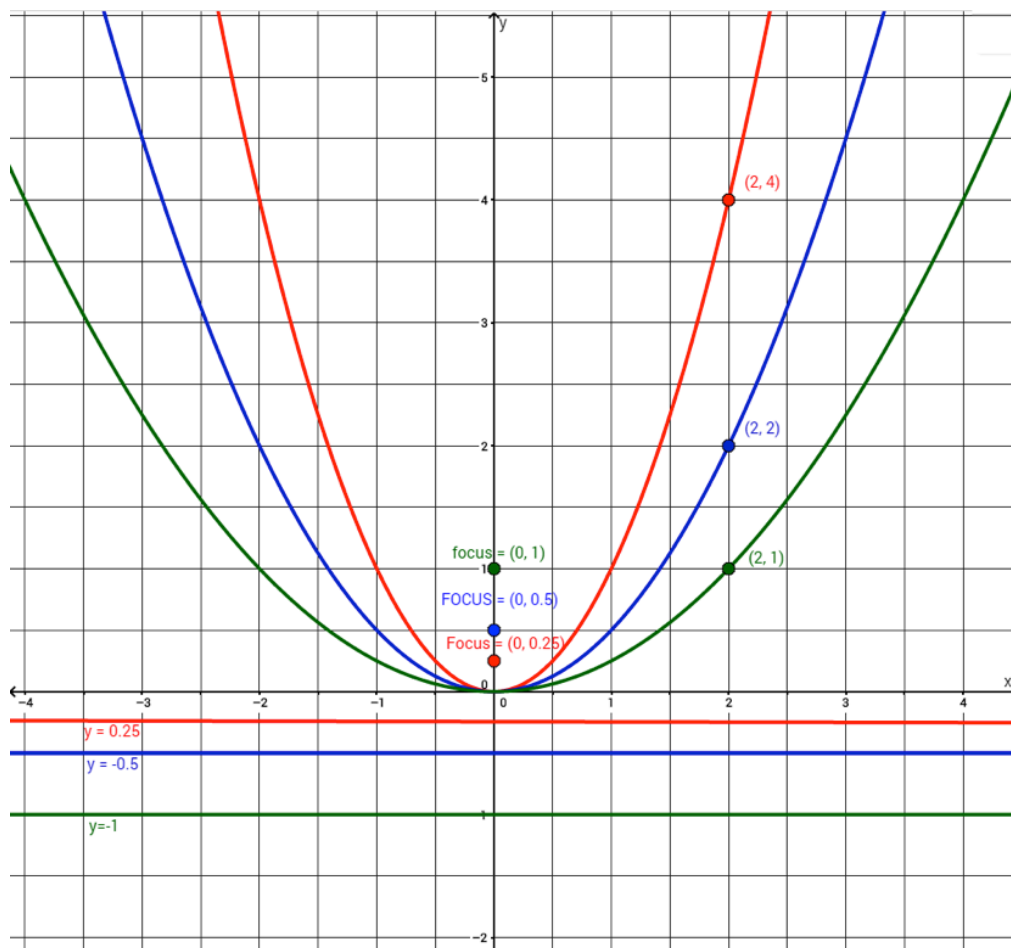


$$\text{General equation for a parabola with a vertex at the origin: } y = \frac{x^2}{4p}$$

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

1. The three labeled points on the three parabolas have the same x -value of 2. Plug that value of 2 in for the x in the general equation for a parabola and simplify.
2. How does the resulting equation help you support your claim that increasing p makes the shape of the parabola wider? Chose a few values of p to build evidence for your claim.
3. Add the parabola with a vertex at the origin and a p value of 5 to the graph below.



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