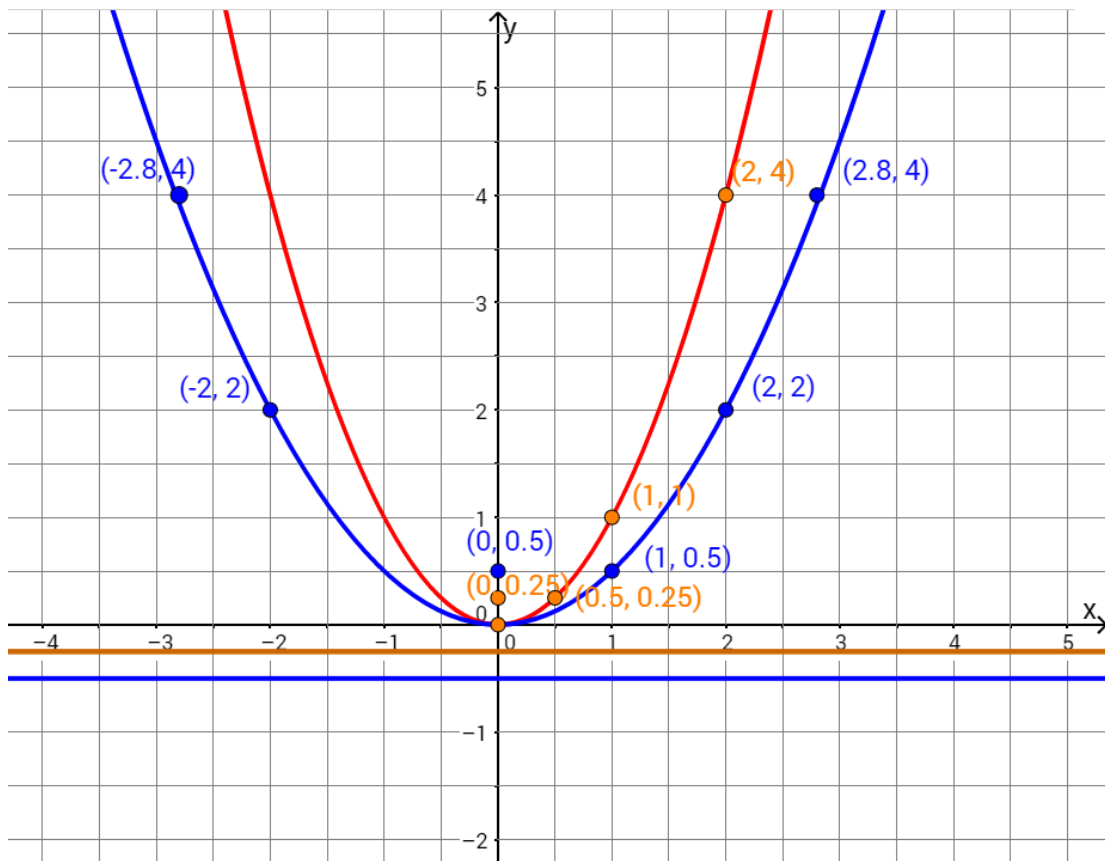


$$\text{General equation for a parabola with a vertex at the origin: } y = \frac{x^2}{4p}$$

What effect does the value of  $p$  have on the graph of the equation of  $y = \frac{x^2}{4p}$ ? Below are the graphs of parabola  $p$  values of  $\frac{1}{4}$  and  $\frac{1}{2}$ .

1. What do you notice about the two graphs?
2. What do you notice about the points on the two graphs that have the same  $y$ -values?
3. What do you notice about the “special points” on the parabola? These are the points that are lined up horizontally with the focus for each parabola.



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