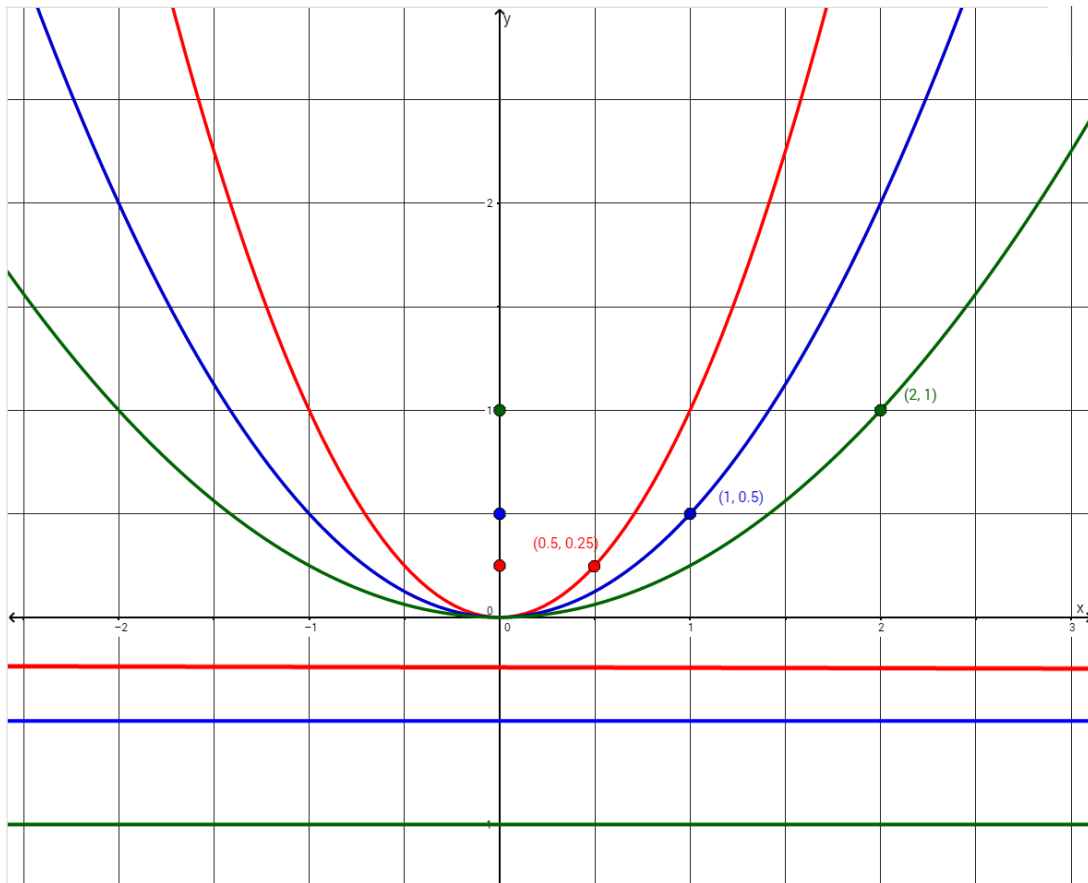Definition: A parabola is the set of points that are **equal distance** from the focus and the directrix.

Below are the graphs of parabola p-values of $1/4$, $1/2$, and 1. The "special points" are labeled on each parabola .

1. What makes the "special points" special? Use the definition of a parabola in your explanation.

2. How are the special points related to the p-value in the equation?

3. What is your conjecture about what will happen to the special points on the coordinate grid as the p-value increases?

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