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

1. Consider a general point on the parabola that is in green below. What is the distance between a general point and the directrix? You might want to remind yourself of how you determined that distance when you had a specific value for y like y = 7 or y = 10. Mark and label the distance between general point on the graph below.



2. Remind yourself of how you used the definition of a parabola and the Pythagorean Theorem to solve for the x-value for a known y-value (like y = 6 or y = 10). For the general case (just using y) represent the distances on the graph that you would need in order to use the Pythagorean Theorem method.

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