**PreCalculus 10.2 Parabolas**

**Parabola -** the set of all points in a plane that are equidistant from a line (directrix) and a fixed point (focus).

Examples:

**Standard Equation of a Parabola** (with vertex at the point

When the vertex is at the origin these become:

Example: Find the standard equation of the parabola with vertex and focus .

Example: Find the standard equation of the parabola with vertex at the origin and focus at .

Example: Find the vertex, focus and directrix of the parabola:

Find the vertex, focus and directrix of the parabola with the equation:

(complete the square)

Standard Form

vertex =

focus =

directrix:

Find the standard form of the equation of the parabola with vertex and focus . Then write the quadratic form of the equation.

Find the standard form of the equation of the parabola graphed below.

Find the standard form of the equation of the parabola with: focus

directrix:

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