

$$y = \frac{1}{4p}(x - h)^2 + k$$

Focus $(h, k+p)$

Vertex (h, k)

Directrix



The diagram illustrates a parabola opening upwards on a Cartesian coordinate system. The vertex is marked with a blue dot at the coordinates (h, k) . The focus is marked with a blue dot at the coordinates $(h, k+p)$. A horizontal line, labeled "Directrix", is positioned below the vertex. The parabola is represented by a blue curve with arrows at both ends. The equation $y = \frac{1}{4p}(x - h)^2 + k$ is displayed in the upper right corner. The x and y axes are shown as orange lines with arrows at their ends.