

Answer on Question #45101 – Math – Analytic Geometry

Find the standard form of the equation of the parabola with a focus at $(0,2)$ and a directrix at $y = -2$.

Distance p between directrix and focus is $2 - (-2) = 4$. Due to the fact that directrix is parallel to the axis Ox , we can say that the standard form of a parabola's equation is

$$x^2 = 2py.$$

So, the answer is the following:

$$x^2 = 8y$$