

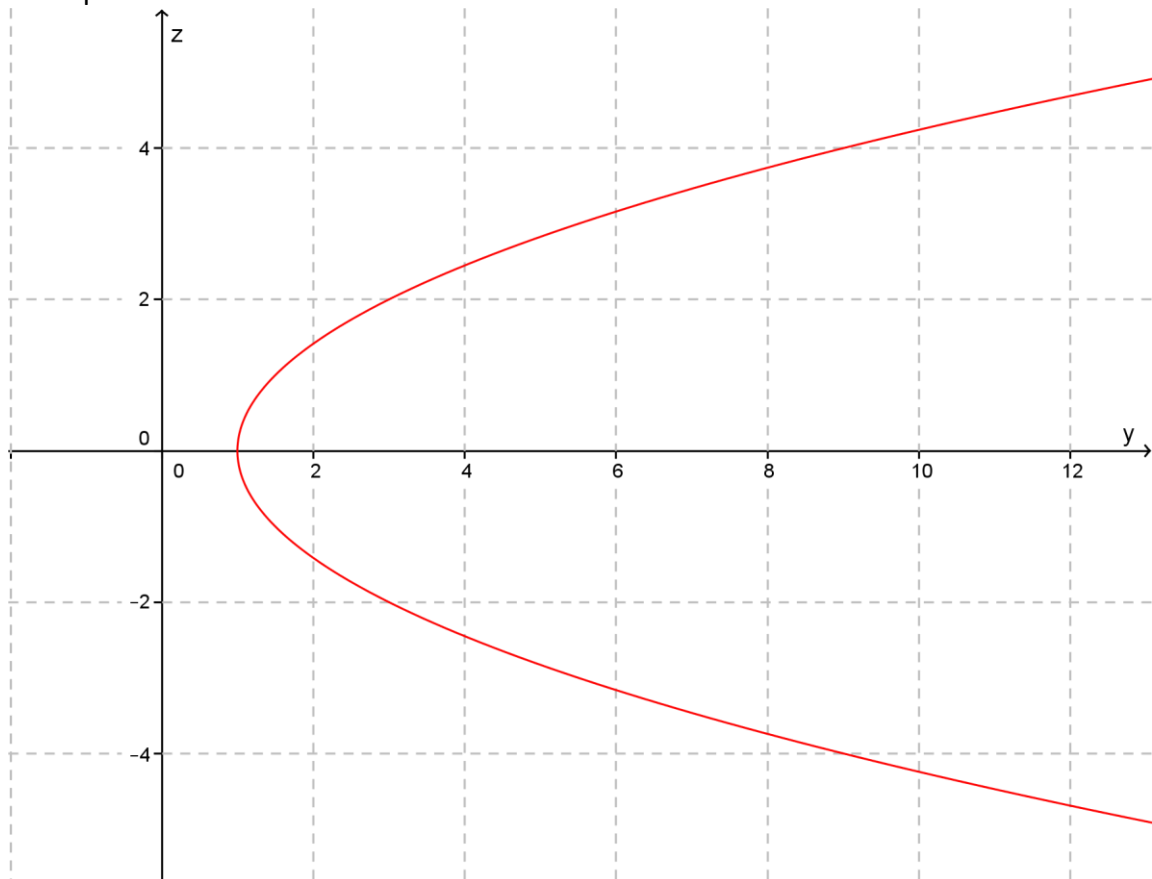
Answer on Question #45100 - Math - Analytic Geometry

Problem.

Trace the conicoid given by $x^2 + 2z^2 = 4y$. What are the sections of this conicoid by the planes $x+2=0$ and $y=1$? Describe geometrically.

Solution.

The intersection of conicoid $x^2 + 2z^2 = 4y$ with plane $x + 2 = 0$ is parabola $4 + 2z^2 = 4y$ (red line) in the plane $x + 2 = 0$.



The intersection of conicoid $x^2 + 2z^2 = 4y$ with plane $y = 1$ is parabola $x^2 + 2z^2 = 4$ (blue line) in the plane $y = 1$.

