

12.6, number 4: Which picture from (a)–(l) corresponds to

$$y^2 + z^2 = x^2?$$

Answer:

When $x = 0$, the equation describes a point in the yz -plane.

When $y = 0$, the equation describes two lines in the xz -plane.

When $z = 0$, the equation describes two lines in the xy -plane.

The total graph is a cone. Whenever x is a non-zero constant, the graph is a circle. So all of the cross sections parallel to the yz -plane are circles. The answer is .