

12.6, number 11: Which picture from (a)–(l) corresponds to

$$x^2 + 4z^2 = y^2?$$

**Answer:**

When  $x = 0$ , the equation describes two lines in the  $yz$ -plane.

When  $y = 0$ , the equation describes one point in the  $xz$ -plane.

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

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