Quadratic Functions

Problem

Given the formula for the volume of a right circular cone: $V = \frac{1}{3}\pi r^2 h$; if the radius of a right circular cone is doubled, and the height of the cone is halved. The volume of the new cone is:

(a) half of the volume of the original cone.

(b) one fourth of the volume of the original cone.

(c) equal to the volume of the original cone.

(d) twice the volume of the original cone.

(e) four times the volume of the original cone.

Answer: (d) Twice the volume. Comment: Draw attention to the power of r.