



The radius of the base of a cylinder is increasing at a rate of 1 meter per hour and the height of the cylinder is decreasing at a rate of 4 meters per hour.

At a certain instant, the base radius is 5 meters and the height is 8 meters.

What is the rate of change of the volume of the cylinder at that instant (in cubic meters per hour)?

Choose 1 answer:

☐ A 180π

☐ B 20π

☐ C -20π

☐ D -180π

The side of the base of a square prism is increasing at a rate of 5 meters per second and the height of the prism is decreasing at a rate of 2 meters per second.

At a certain instant, the base's side is 6 meters and the height is 7 meters.

What is the rate of change of the volume of the prism at that instant (in cubic meters per second)?

Choose 1 answer:

☐ A -348

☐ B 492

☐ C 348

☐ D -492

The volume of a square prism with base side s and height h is $s^2 h$.