

# Geometry - 3D Transformations

## Grade 11 | Difficulty: Hard

1. Find the volume of a cone with a base radius of 5 cm and height 12 cm.
2. Prove that the volume of a pyramid is one-third the volume of a prism with the same base and height.
3. Determine the coordinates of a point after a 3D rotation around the z-axis.
4. Find the intersection of a plane and a sphere in 3D space.
5. Calculate the distance between two skew lines.