

SAMPLE ITEMS

1. Jason constructed two cylinders using solid metal washers. The cylinders have the same height, but one of the cylinders is slanted as shown.



Which statement is true about Jason's cylinders?

- A. The cylinders have different volumes because they have different radii.
- B. The cylinders have different volumes because they have different surface areas.
- C. The cylinders have the same volume because each of the washers has the same height.
- D. The cylinders have the same volume because they have the same cross-sectional area at every plane parallel to the bases.

Correct Answer: D

2. What is the volume of a cylinder with a radius of 3 in. and a height of $\frac{9}{2}$ in.?

- A. $\frac{81}{2}\pi$ in.³
- B. $\frac{27}{4}\pi$ in.³
- C. $\frac{27}{8}\pi$ in.³
- D. $\frac{9}{4}\pi$ in.³

Correct Answer: A