

Honors Geometry**Volume Ratios****Name:**

1. The ratio of the sides of two cubes is 3:5.

a) What is the ratio of the surface areas?

b) What is the ratio of the volumes?

2. A sphere has a volume of $36\pi \text{ in}^3$.

a) What is the radius of the sphere?

b) What is the radius of a sphere with 8 times the volume?

c) What is the radius of a sphere with 4 times the volume (nearest hundredth)?

3. The ratio of the surface areas of two similar solids is 3:4

a) What is the ratio of the sides (nearest hundredth)?

b) What is the ratio of the volumes (nearest hundredth)?

4. Two rectangular prisms, A and B, have the same size base, however B is twice as tall as A.

a) What is the ratio of the volumes?

b) Why is this not a violation of the “volumes of similar objects” rule?