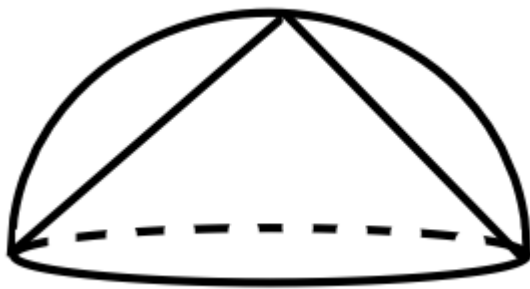


October 9th

The circular base of a hemisphere is also the base of an inscribed right cone.

What is the ratio of the volume of the hemisphere to the volume of the cone?



$$\text{Volume of cone} = \frac{1}{3} \times \text{base area} \times \text{height}$$

$$= \frac{1}{3} \pi r^2 \times r = \frac{1}{3} \pi r^3$$

$$\text{Volume of hemisphere} = \frac{2}{3} \pi r^3$$

$$\therefore \text{ratio volumes hemisphere:cone} = \mathbf{2:1}$$