
DoNow: Talk about the recent write-up problem

1. Find the volume of the largest cone that can be inscribed in a sphere of radius a . Why is your answer reasonable?

New Questions

2. Sketch the graph of a function f with the property that:

$$\left| \int_1^5 f(x) dx \right| < \int_1^5 |f(x)| dx$$

3. Show that $\int_0^{\pi/2} \sqrt{1 + \cos(2x)} dx = \sqrt{2} \int_0^{\pi/2} \cos x dx$

4. Show that $\frac{\pi}{2} < \int_0^{\pi} \cos(\sin x) dx \leq \pi$
(Without using a calculator.)