



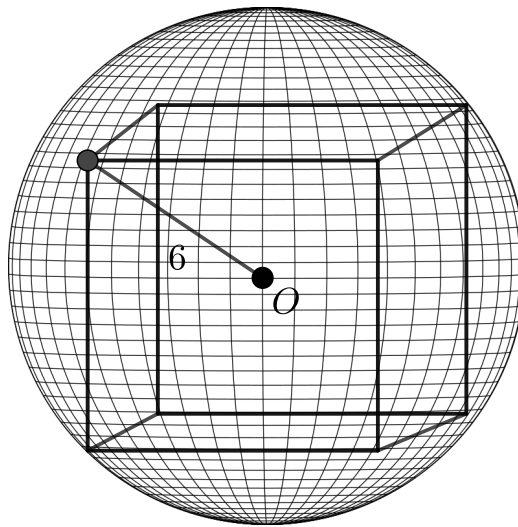
## Problem of the Week

### Problem E

### All Around the Cube

A cube is said to be *inscribed* in a sphere when all the vertices of the cube are on the surface of the sphere.

In the diagram below, the cube is inscribed in the sphere with centre  $O$ . If the radius of the sphere is 6 cm, determine the volume of the cube.



NOTE:

In solving the above problem, it may be helpful to use the fact that if a cube is inscribed in a sphere with centre  $O$ , then the cube will also have centre  $O$ .

