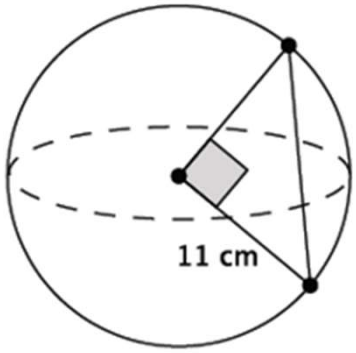
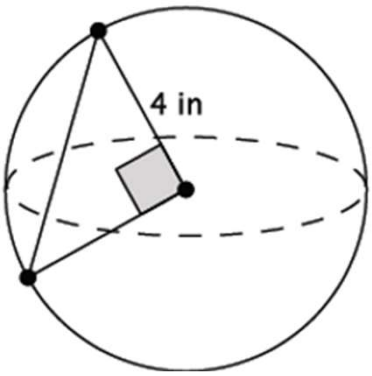
Pythagorean Theorem in 3D Solids

1. What is the length of the chord of the sphere shown below? Give an exact answer using a square root.

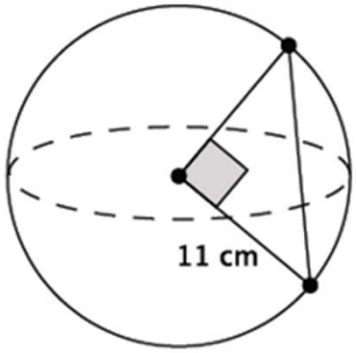


2. What is the length of the chord of the sphere shown below? Give an exact answer using a square root.



Pythagorean Theorem in 3D Solids

1. What is the length of the chord of the sphere shown below? Give an exact answer using a square root.

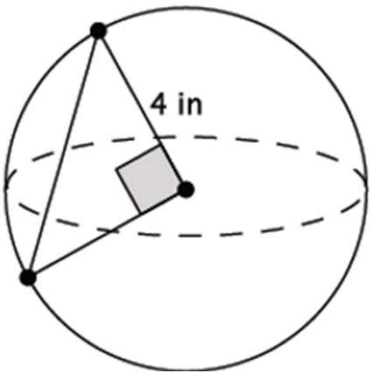


Let c cm represent the length of the chord.

$$11^2 + 11^2 = c^2$$
$$121 + 121 = c^2$$
$$242 = c^2$$
$$\sqrt{242} = \sqrt{c^2}$$
$$\sqrt{11^2 \times 2} = c$$
$$11\sqrt{2} = c$$

The length of the chord is $11\sqrt{2}$ cm.

2. What is the length of the chord of the sphere shown below? Give an exact answer using a square root.



Let c in. represent the length of the chord.

$$4^2 + 4^2 = c^2$$
$$16 + 16 = c^2$$
$$32 = c^2$$
$$\sqrt{32} = \sqrt{c^2}$$
$$\sqrt{4^2 \times 2} = c$$
$$4\sqrt{2} = c$$

The length of the chord is $4\sqrt{2}$ in.