



GEOMETRY – UNIT 6: CIRCLES

CHARACTERISTICS OF SPHERES

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In this lesson you will see how what you already know about circles can be extended to describe spheres. You will also see how spheres have additional properties that do not apply to circles.

Here are your goals for this lesson:

- Identify and define the parts of a sphere
- Calculate measures and relate other basic shapes, such as circle and triangle, to solve problems involving spheres

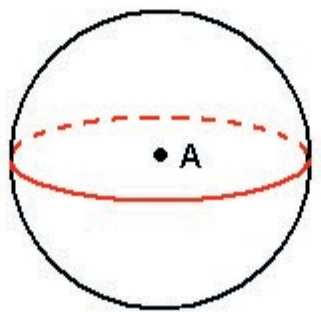


DEFINITIONS

- Circle:** the set of all points in a plane that are at a given distance from a given point in the plane
- Sphere:** the set of all points that are the same distance from a given point

Many properties and parts of a circle suggest similar properties and parts of a sphere. Notice, for example, how close the definition of a circle and a sphere are to each other.

Omitting the words *in a plane* from the definition of a circle gives the definition of a sphere. As a result, a sphere is a three-dimensional object. Because the points of a circle need to lie on the same plane, it is a two dimensional object. A sphere is named by its center just like a circle is. Spheres, like circles, are concentric if they have the same center.



Sphere A