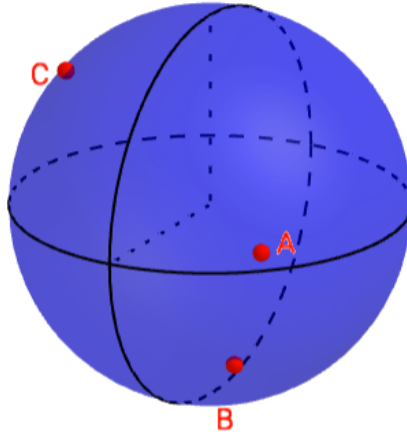


Sphere Cross Sections

Performance Task: In the image below, there are three points (A, B, and C) located on the surface of a sphere.



Since the 3 points are not collinear, there is a single plane which passes through all three points A, B, and C. This would create a cross section through the sphere.

1. What is the shape of the cross section formed by slicing the sphere above with the single plane through all three points A, B, and C?
2. What cross section shapes can be formed by moving points A, B, and C anywhere along the surface of the sphere, being sure the 3 points are not collinear?
3. Which of the following statements is TRUE about the cross sections of a sphere?
 - a. The radius of the cross section can only be less than the radius of the sphere.
 - b. The radius of the cross section can be less than, or equal to the radius of the sphere.
 - c. The radius of the cross section can only be equal to the radius of the sphere.
 - d. The radius of the cross section can be greater than, less than, or equal to the radius of the sphere.
4. Would changing the height or radius of the sphere affect your answers above? (Justify your answer.)
 - a. No
 - b. Yes