Title of Book: Sir Cumference and the Sword and the Cone

**Author:** Cindy Neuschwander

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## **Grade Levels for Recommended Use:** Sixth Grade – Eighth grade

(7.6) Geometry and spatial reasoning. The student compares and classifies shapes and solids using geometric vocabulary and properties. The student is expected to:

(C) use properties to classify solids, including pyramids, cones, prisms, and cylinders:

**Brief Summary:** King Arthur has hidden his sword, Edgecalibur. The knight who finds it will be the next king. Sir Cumference, Lady Di of Ameter, and their son Radius try to point Sir Vertex in the right direction. Does his sharp thinking give him the edge?

## **Materials needed:**

Folding Geometric Shapes: Seven (7) shapes to include: cone, cube, cylinder, rectangular prism, triangular prism, square pyramid, and triangular pyramid

## **Suggested Activity:**

**Engage:** Read the book orally up to page 11. Write the riddle and read it again, giving the students time to think about it. Their challenge for the day is fill in the following chart using the shapes. Teacher should model procedure for the cube.

Polyhedron  Cube	Faces	Vertices	Faces + Vertices	Edges	Faces + Vertices – Edges
Cube					
Square Pyramid					
Triangular Pyramid					
Rectangular Prism					
Triangular Prism					

The students will "discover" the Rule of Two discovered by the Swiss Mathematician Leonard Euler (pronounced Oiler) Faces + Vertices – Edges = 2

Adapted by Dr. Faye Bruun, 2010