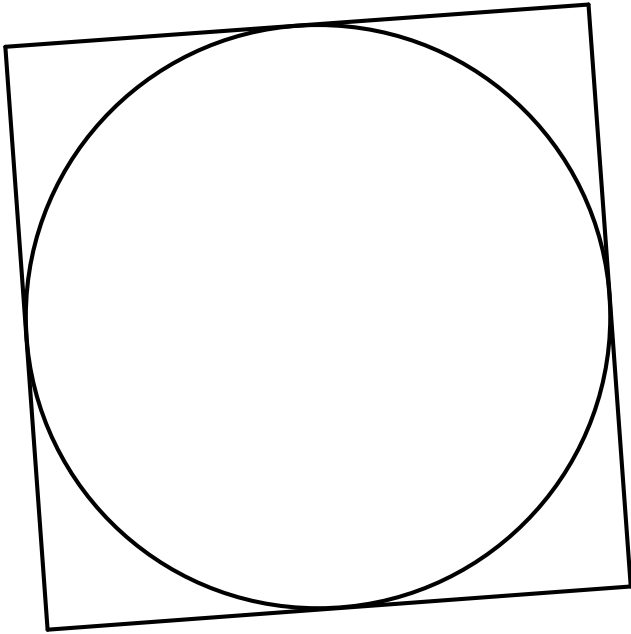


## » Area Investigations - Inscribed Circles

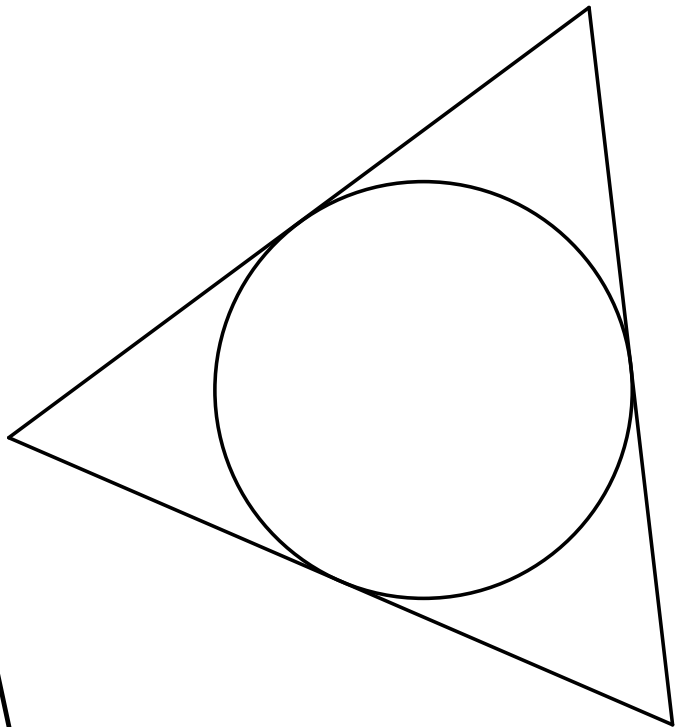
In geometry, an inscribed shape is one that is enclosed by and "fits snugly" inside another geometric shape. There must be no object similar to the inscribed object that is larger and also enclosed by the outer figure.

For the following **equilateral** figures, calculate the **ratio** between the *area of the polygon* and the *area of the inscribed circle*. Let the radius of the inscribed circle equal  $R$ . Note: constructions may be required!

### 1 Square



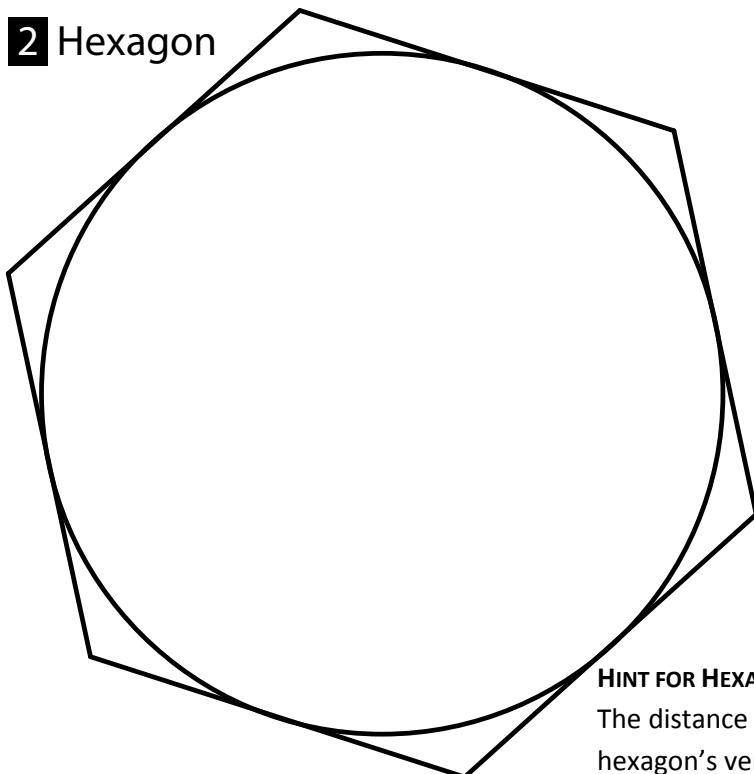
### 3 Triangle



#### HINT FOR TRIANGLE

The distance from the centre of the circle to one of the triangle's vertices is twice the circle's radius.

### 2 Hexagon



#### HINT FOR HEXAGON

The distance from the centre of the circle to one of the hexagon's vertices is equal to the hexagon's side length.

