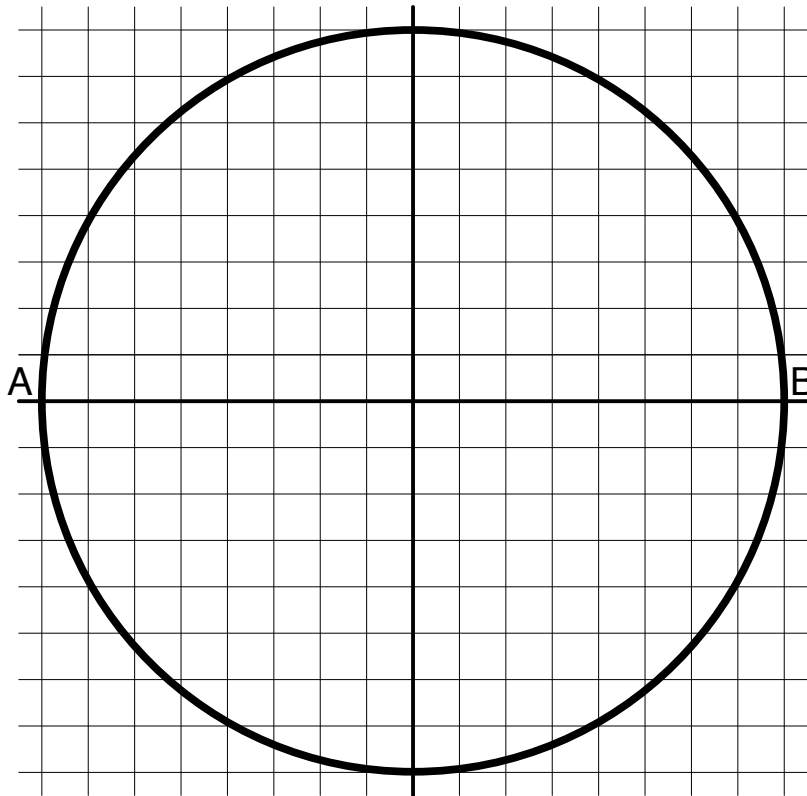


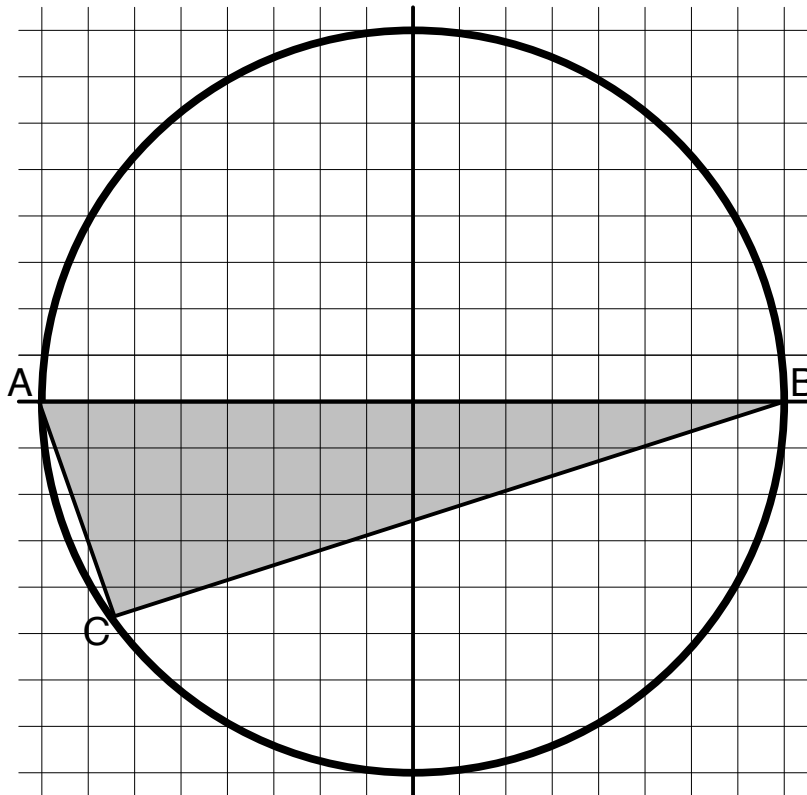
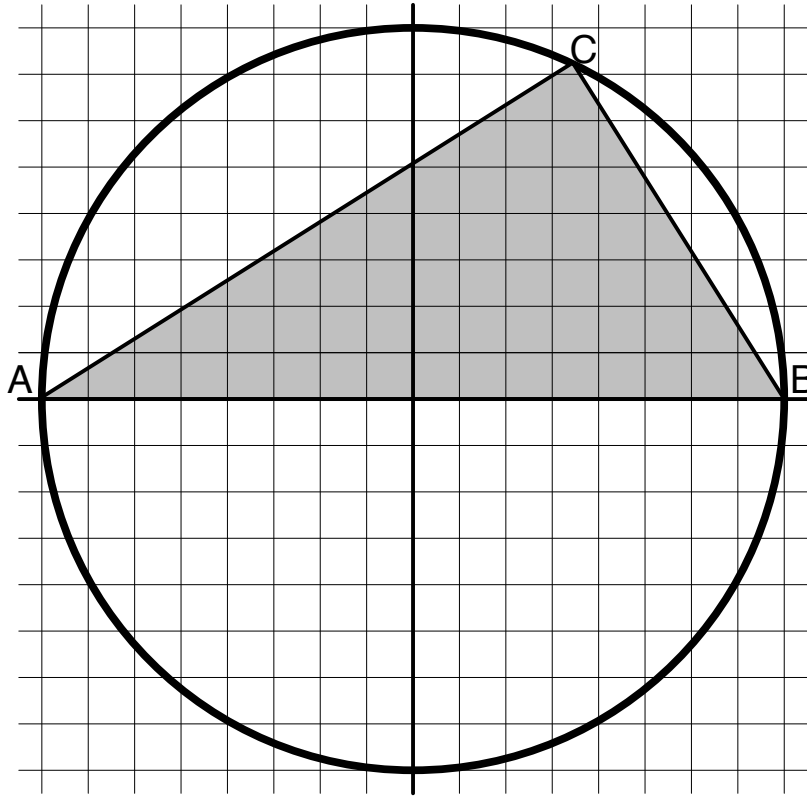
Triangle in Circle

Here is a circle whose radius is 8 units, drawn on graph paper.



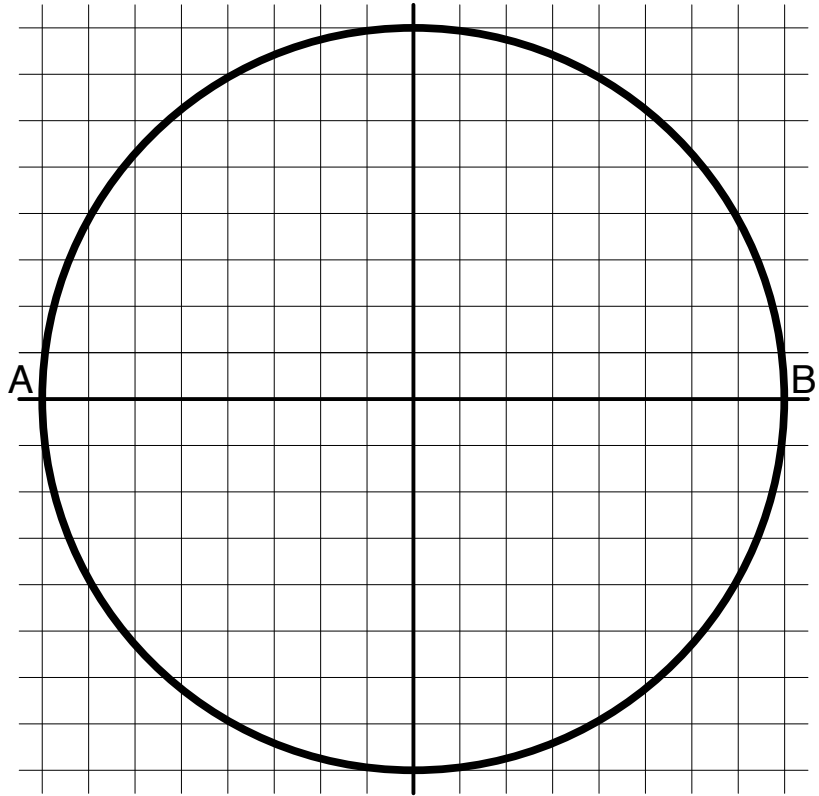
Suppose you were asked to form a triangle using point A, point B, and a third point C that could be located anywhere on the circle. The next page shows two of the many different ways that this triangle could appear.

Here are two of the many different ways that triangle ABC could appear:



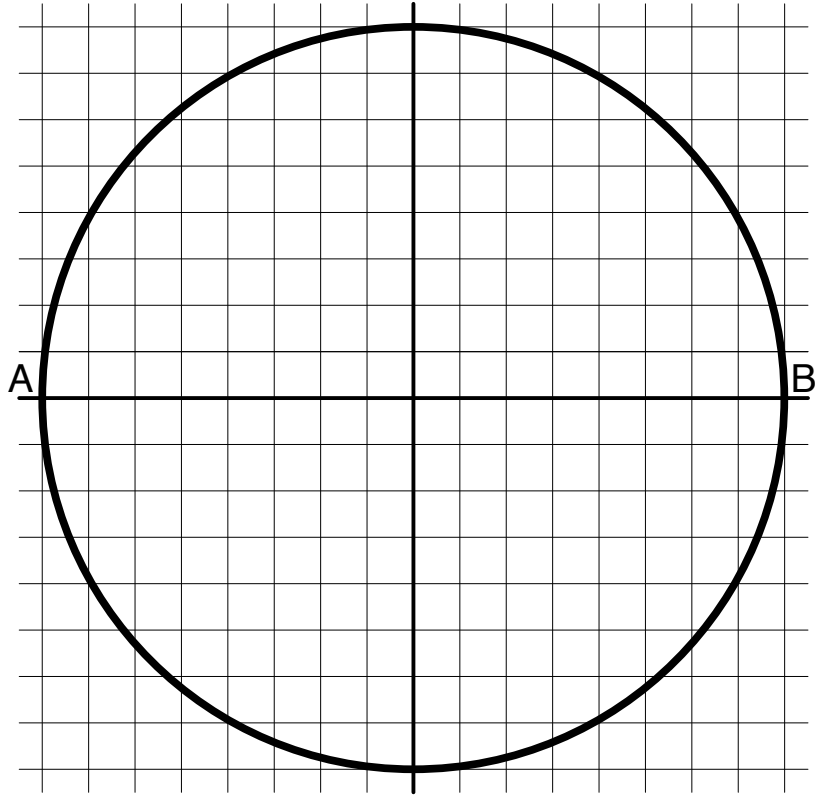
1. Draw point **C** at a location on the circle that would give triangle **ABC** the **maximum** (largest possible) area.

Draw and shade in triangle **ABC**.



Calculate the area of your triangle, and explain why you think your triangle has the maximum area.

2. Draw a new point C on the circle, and triangle ABC, so that the area of the triangle is **half the area of the triangle you drew for problem 1.**



Explain why you drew the triangle as you did.

3. If you moved point C to yet another location on the circle, what is the smallest area that triangle ABC could have? Explain your answer.