Inscribed, Escribed and Circumscribed circles.

Learning outcomes:

- I can inscribe and circumscribe a circle to triangles and regular polygons.
- I can escribe circles to triangles.

By the end of the lesson I will be able to:

- Inscribe a circle to a triangle
- Escribe a circle to a triangle
- Circumscribe a circle to a triangle

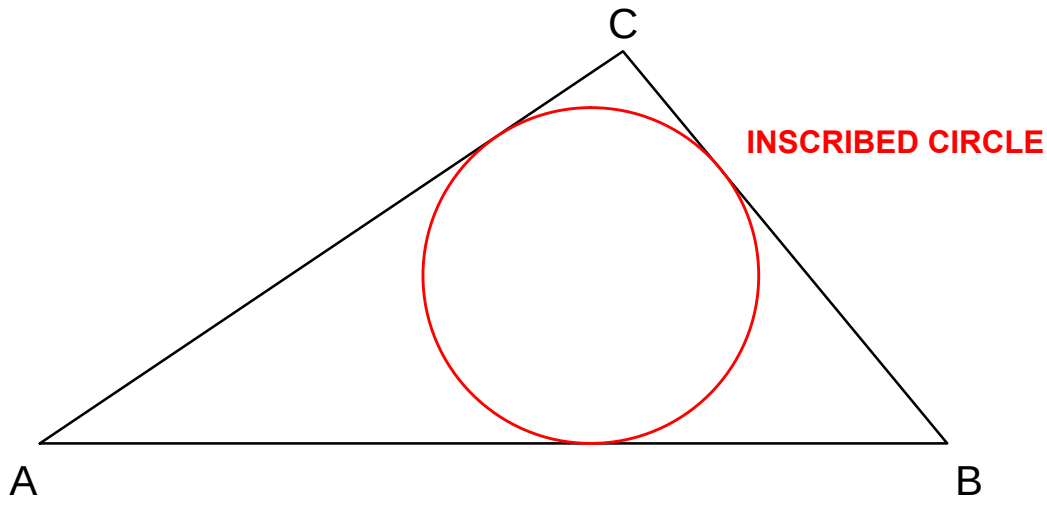
Before studying this lesson I need to make sure that I know how to:

- Draw circles using the compass
- Draw a triangle from given data
- Bisect an angle
- Bisect a line

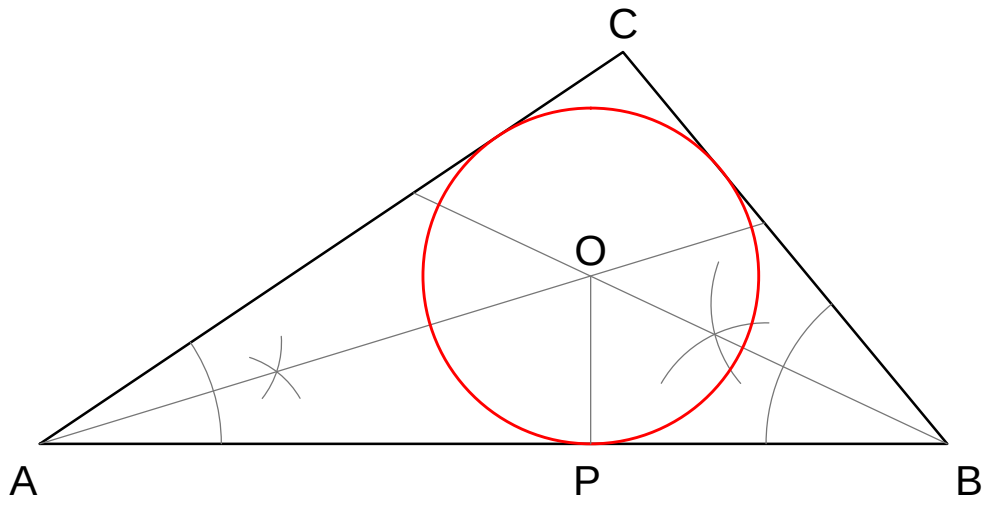
Self Assessment (to be done after the lesson)				
	Well Achieved J	Achieved J	Almost There K	Need more Effort L
I can bisect an angle and a line very accurately				
I can draw an inscribed circle				
I can draw an escribed circle				
I can draw a circumscribed circle				

Inscribed circle

An **Inscribed circle** is a circle that is drawn inside a triangle touching all three sides. The following video illustrates the differences and constructions of the three types of circles touching with triangles:
https://youtu.be/PGWgM3oeAag

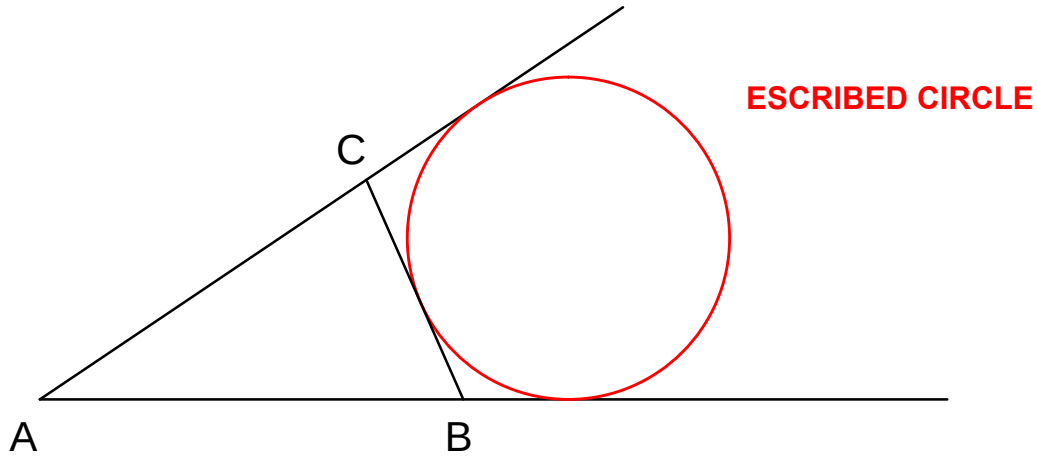


To draw an inscribed circle we need to bisect **TWO** inside angles, drop a perpendicular and draw the circle **inside** the triangle.

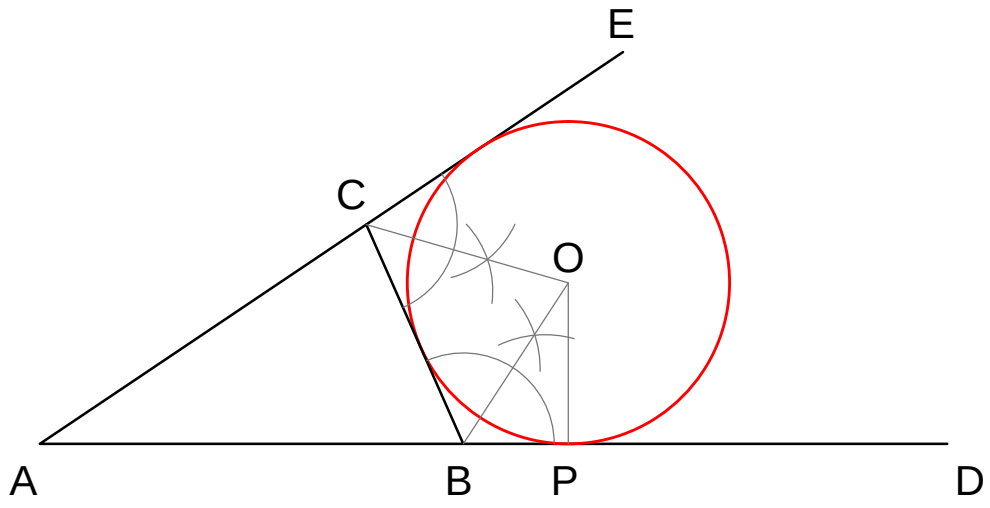


Escribed circle

An **Escribed circle** is a circle that touches one side of the triangle and the extensions of the other two sides. The following video illustrates the differences and constructions of the three types of circles touching with triangles: https://youtu.be/PGWgM3oeAag

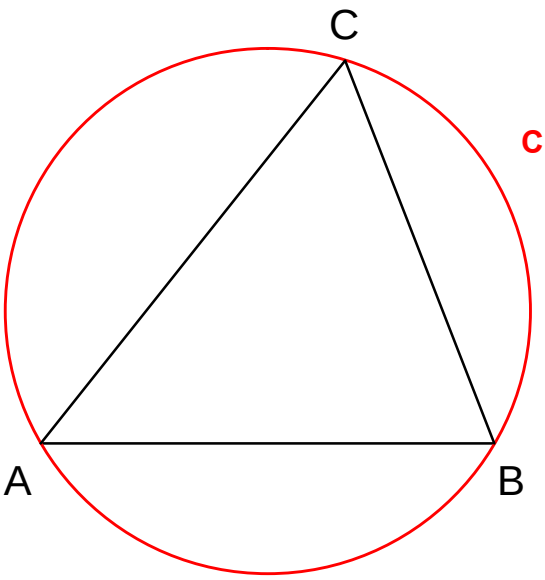


To draw and escribed circle we need to bisect **TWO** outside angles, drop a perpendicular and draw the circle **outside** the triangle.



Circumscribed circle

A **Circumscribed circle** is a circle that is drawn outside of a triangle and touches all three vertices. The following video illustrates the differences and constructions of the three types of circles touching with triangles: https://youtu.be/PGWgM3oeAag



CIRCUMSCRIBED CIRCLE

To draw a circumscribed circle we need to bisect **TWO** sides and draw the circle **outside** the triangle touching vertices **A**, **B** and **C**.