The Unit Circle

10th Grade

Trig beyond right triangles, and the sign pattern in each quadrant.

On a circle of radius 1 centred at the origin, a point at angle θ has coordinates (cos θ, sin θ).

$$(\cos\theta, \sin\theta)$$

Quadrant I All ratios positive.	**both positive**
Quadrant II x is negative, so cos is negative.	**sin positive**
Quadrant III Both x and y negative, so their ratio is positive.	**tan positive**
Quadrant IV y is negative, so sin is negative.	**cos positive**

ASTC: All, Sine, Tangent, Cosine positive, going anticlockwise from quadrant I.