

Definitions of 6 Trigonometric Functions

(Trig Ratios)

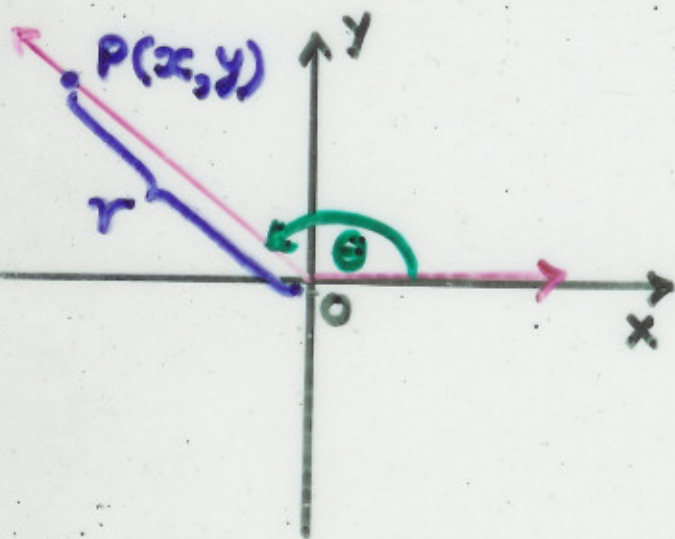
Let θ be any angle.

Put this angle in the **standard position**.

Let $P(x, y)$ be any point on the terminal side of this angle.

Let $OP = r$.

Then we know: $r = \sqrt{x^2 + y^2}$



Then we define:

$$\sin \theta = \frac{y}{r} \quad \text{Sine of } \theta$$

$$\cos \theta = \frac{x}{r} \quad \text{Cosine of } \theta$$

$$\tan \theta = \frac{y}{x} \quad \text{Tangent of } \theta$$

$$\cot \theta = \frac{x}{y} \quad \text{Cotangent of } \theta$$

$$\sec \theta = \frac{r}{x} \quad \text{Secant of } \theta$$

$$\csc \theta = \frac{r}{y} \quad \text{Cosecant of } \theta$$