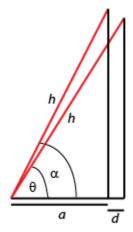
Trig Reps



Here are three different ways of representing the sine and cosine functions

1. Through ratios of the sides of right angled triangles:



$$\cos(\theta) = \frac{a+d}{h} \quad \cos(\alpha) = \frac{a}{h}$$

$$\cos(heta)=rac{a+d}{h} \quad \cos(lpha)=rac{a}{h} \ \sin(heta)=rac{\sqrt{h^2-(a+d)^2}}{h} \quad \sin(lpha)=rac{\sqrt{h^2-a^2}}{h}$$

2. Through power series:

$$\cos(x) = 1 - \frac{x^2}{2!} + \frac{x^4}{4!} - \frac{x^6}{6!} + \cdots$$
 $\sin(x) = x - \frac{x^3}{3!} + \frac{x^5}{5!} - \frac{x^7}{7!} + \cdots$

3. Through e and i:

$$\cos(x) = rac{e^{ix} + e^{-ix}}{2} \qquad \sin(x) = rac{e^{ix} - e^{-ix}}{2i}$$