

# [trigonometry]

1. By using your calculator and the CAST rule, solve the following equations for the angles found in the interval  $0 \leq x \leq 360$ .

- $\sin x = \frac{3}{4}$
- $\tan x = -\frac{3}{2}$
- $5 \cos x = -3$
- $\cos 2x = -\frac{4}{5}$
- $(4 \sin x - 3)(3 \cos x + 2) = 0$
- $4 \sin x + 1 = 0$
- $\cos x(3 \cos x + 1) = 0$
- $2 \sin x - \sin x \tan x = 0$
- $3 \sin^2 x + \sin x = 0$
- $\tan^2 x - \tan x - 6 = 0$
- $3 \cos^2 x - 2 \cos x - 1 = 0$
- $5 \cos 2x - 3 = 0$
- $\sqrt{3} \cos^2 2x + \cos 2x = 0$

2. Using your calculator, the graphs of trig ratios, and the CAST rule, solve the following equations for the angles found in the interval  $0 \leq x \leq 2\pi$

- $\cos x = 0.5$
- $\sin x = -0.5$
- $\tan x = 1$
- $\tan^2 x = 1$
- $\sec x = 2$
- $\tan x - \sqrt{3} = 0$
- $\sin 2x = \frac{1}{\sqrt{2}}$
- $\tan 2x = -1$
- $\cos x + 2 \cos x \sin x = 0$
- $(\cos x + 0.5)(\cos x - 0.5) = 0$
- $(\sin x - 1)(\tan x - 1) = 0$
- $\sin x(\sin x + 1) = 0$
- $\sin x - \sin x \tan x = 0$
- $2 \sin^2 x + \sin x = 0$
- $\cos^2 x - 3 \sin^2 x = 1$
- $\sin^2 x - \sin x - 2 = 0$
- $2 \sin^2 x + \sin x = 1$
- $\cos^2 2x + \cos 2x = 0$
- $\sin x - \cos x = 0$