Solving Trigonometric Equations

Solve for $0 \leq x < 360°$, giving your answers to 1 decimal place.

(a) $\sin x = 0.78$

(b) $2 \tan x = 5$

(c) $16 \cos^2 x = 9$

(d) $\tan x + 2 = 5$

(e) $4 \sin^2 x - 1 = 0$

(a) $x = 51.3°, 128.7°$

(b) $x = 68.2°, 248.2°$

(c) $x = 41.4°, 318.6°, 138.6°, 221.4°$

(d) $x = 71.6°, 251.6°$

(e) $x = 30°, 150°, 330°, 210°$

Solve for $0 \leq x < 360°$, giving your answers to 1 decimal place.

(a) $5 \sin x = \cos x$

(b) $\sin x + \cos x = 0$

(c) $7 \sin x = 3 \tan x$

(a) $x = 11.3°, 191.3°$

(b) $x = 135°, 315°$

(c) $x = 0°, 180°, 64.6°, 295.4°$

Solve for $0 \leq \theta < 360°$, giving your answers to 1 decimal place.

(a) $\sin^2\theta - 3\cos^2\theta = 0$

(b) $2\cos^2\theta - \cos\theta - 1 = 0$

(c) $\tan^2\theta + 3\tan\theta = 0$

(d) $2\sin^2\theta + 7\sin\theta + 5 = 0$

(a) $\theta = 60°, 300°, 120°, 240°$

(b) $\theta = 0°, 120°, 240°$

(c) $\theta = 0°, 180°, 108.4°, 288.4°$

(d) $\theta = 270°$

Solve for $0 \leq \theta < 360°$, giving your answers to 1 decimal place.

(a) $2\cos^2\theta + 3\sin\theta = 3$

(b) $2\sin^2\theta = 3 - 3\cos\theta$

(a) $\theta = 0°, 30°, 150°$

(b) $\theta = 0°, 60°, 300°$