

W7 – 5.4 Solve Quadratic Trigonometric Equations

MHF4U

1) Solve $\sin^2 x - 2 \sin x - 3 = 0$ on the interval $0 \leq x \leq 2\pi$

2) Solve $\csc^2 x - \csc x - 2 = 0$ on the interval $0 \leq x \leq 2\pi$

3) Solve $2\sec^2 x - \sec x - 1 = 0$ on the interval $0 \leq x \leq 2\pi$

4) Solve $\tan^2 x - \tan x - 6 = 0$ on the interval $0 \leq x \leq 2\pi$. Round answers to the nearest hundredth of a radian.

5) Solve $6\cos^2 x + 5\cos x - 6 = 0$ on the interval $0 \leq x \leq 2\pi$

6) Solve $3\csc^2 x - 5\csc x - 2 = 0$ on the interval $0 \leq x \leq 2\pi$

7) Solve $2\tan^2 x - 5\tan x - 3 = 0$ on the interval $0 \leq x \leq 2\pi$

8) Solve $\cot x \csc^2 x = 2 \cot x$ on the interval $0 \leq x \leq 2\pi$

9) Solve for θ to the nearest hundredth, where $0 \leq \theta \leq 2\pi$

a) $3 \tan^2 \theta - 2 \tan \theta = 1$

b) $12 \sin^2 \theta + \sin \theta - 6 = 0$

c) $5 \cos(2\theta) - \cos \theta + 3 = 0$