TRIGONOMETRIC EQUATIONS INVOLVING ANGLE FORMULAE

1 Solve: **(a)** $\cos 2\theta = \cos\theta, 0 \le \theta \le 2\pi$ **(b)** $2\cos 2\theta = 4\cos\theta - 3, 0 \le \theta \le 2\pi$

TRIGONOMETRIC EQUATIONS INVOLVING ANGLE FORMULAE

1 Solve:

(c) $3\tan 2\theta = 2\tan\theta, 0 \leq \theta \leq 2\pi$

(d) $\tan\theta + 2\cot\theta = 3, 0° \leq \theta \leq 360°$

3 Solve: **(a)** $\cos 2x \cos \frac{\pi}{6} - \sin 2x \sin \frac{\pi}{6} = \frac{1}{2}, 0 \leq x \leq 2\pi$

5 Solve $\tan\theta = \sin 2\theta, 0 \leq \theta \leq 2\pi$.

6 Solve $\cos^2\theta = 2\cos^2\frac{\theta}{2}$, $0° \leq \theta \leq 360°$.

7 Solve $\sin 3x \cos x - \cos 3x \sin x = \frac{\sqrt{3}}{2}$, $0 \leq x \leq 2\pi$.

9 Solve for $0 \leq \theta \leq \pi$, the equations:

(a) $\sin 4\theta \cos \theta = \sin 3\theta \cos 2\theta$

10 Solve for $0 \leq x \leq 2\pi$, the equations:

(a) $2\cos\left(x+\frac{\pi}{3}\right)\cos x = 1$

11 Solve for $0 \leq \theta \leq \pi$, the equations:

(c) $\sin\left(\theta + \frac{\pi}{4}\right) + \sin\left(\theta + \frac{\pi}{12}\right) = 1$

12 Solve for $0 \leq x \leq 2\pi$, the equations:

(a) $\sin 2x - \sin x = \cos 2x - \cos x$