

Trigonometric Equations

Type 2

1. Solve the following equations.

(a) $2\cos 2x - 1 = 0$

$0 \leq x \leq 360$

(b) $\sqrt{2} \sin 2x + 1 = 0$

$0 \leq x \leq 2\pi$

(c) $4\tan 2x + 9 = 1$

$0 \leq x \leq 360$

(d) $7\sin 2x - 4 = 1$

$0 \leq x \leq 2\pi$

(e) $6\tan 3x + 2 = 8$

$0 \leq x \leq 180$

(f) $4\sqrt{3} + 8\cos 3x = 0$

$0 \leq x \leq \pi$

(g) $5\tan 2x + 7 = 1$

$0 \leq x \leq 2\pi$

(h) $2\cos (2x - 30) + \sqrt{2} = 0$

$0 \leq x \leq 2\pi$

(i) $4\cos (2x + 60) - 2 = 1$

$0 \leq x \leq 360$

(j) $3\sin (3x - 75) + 4 = 2$

$0 \leq x \leq 360$

(k) $6\sin(2x - \frac{2\pi}{3}) + 3 = 0$

$0 \leq x \leq 2\pi$

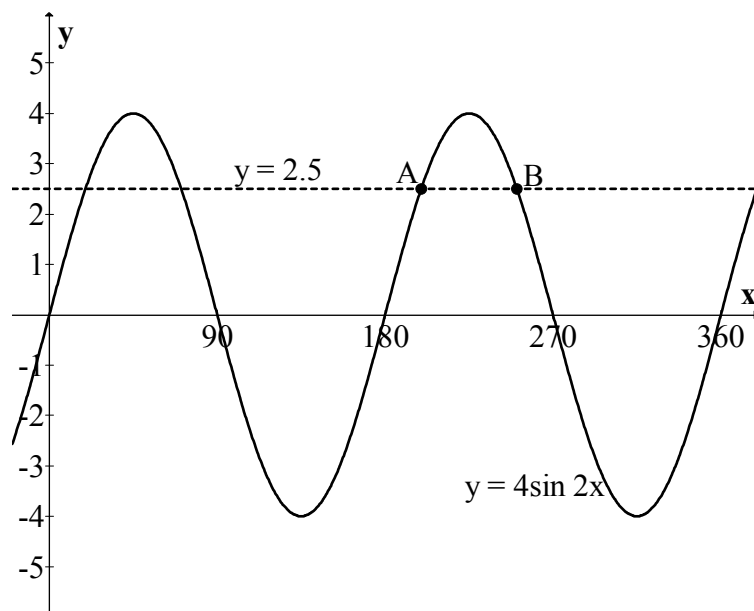
(l) $3 + 5\tan (2x + \frac{\pi}{2}) = 8$

$0 \leq x \leq 2\pi$

2. The diagram opposite shows part of the graph of $y = 4 \sin 2x$.

The line $y = 2.5$ is also drawn on the graph.

Find the x-coordinates of A and B.



3. The diagram shows part of the graph of $y = 5\cos(2x - 45)$.

The line $y = -2$ is also shown on the graph.

Find the coordinates of the 4 points of intersection shown.

