

Essential Skills 13

The skills in this series of worksheets appear frequently.

These are the GIFTS you must take to succeed

Trig Equations using Double Angle Formula

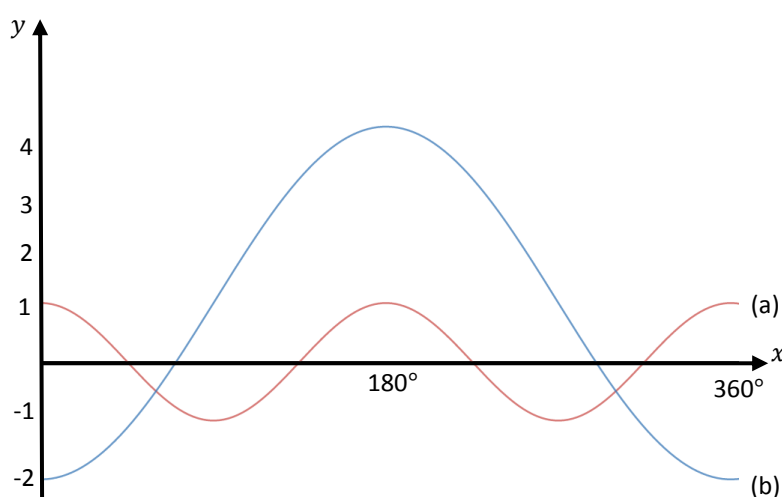


Solve each equation within the range shown:

1. $\sin 2x^\circ - \cos x^\circ = 0$ $(0 \leq x \leq 360)$
2. $\sin 2x^\circ + 3\sin x^\circ = 0$ $(0 \leq x \leq 360)$
3. $\cos 2x^\circ + \cos x^\circ = 0$ $(0 \leq x \leq 360)$
4. $\cos 2x^\circ - 4\sin x^\circ + 5 = 0$ $(0 \leq x \leq 360)$
5. $3\cos 2x^\circ - \cos x^\circ + 1 = 0$ $(0 \leq x \leq 360)$
6. $2\cos 2x^\circ + \cos x^\circ - 1 = 0$ $(0 \leq x \leq 360)$
7. $\cos 2x^\circ + 3\sin x^\circ - 2 = 0$ $(0 \leq x \leq 2\pi)$
8. $5\cos 2x + 3\sin x - 4 = 0$ $(0 \leq x \leq 2\pi)$
9. $\cos 2x = \cos x$ $(0 \leq x \leq 2\pi)$
10. $2\cos 2x + 1 = 0$ $(0 \leq x \leq 2\pi)$



APPLYING QUESTION



- (i) Find the equation of (a) in the form $y = \cos bx^\circ$.
- (ii) Find the equation of (b) in the form $y = c - a\cos x^\circ$.
- (iii) Find algebraically the points of intersection of the graphs.