

② $9 \cos(2\theta) = 9 \cos^2\theta - 4$
 $9(2 \cos^2\theta - 1) = 9 \cos^2\theta - 4$
 $18 \cos^2\theta - 9 = 9 \cos^2\theta - 4$
 $9 \cos^2\theta = 5$
 $\cos^2\theta = \frac{5}{9}$
 $\cos\theta = \frac{\sqrt{5}}{3}$ or $\cos\theta = -\frac{\sqrt{5}}{3}$
 $\theta = (41.8^\circ), 360^\circ - 41.8^\circ, 138.2^\circ, 360^\circ - 138.2^\circ$



Sep 28-7:35 PM

$6 \sin(2t) + 9 \sin(t) = 0$
 $6 \cdot 2 \sin(t) \cos(t) + 9 \sin(t) = 0$
 $12 \sin(t) \cos(t) + 9 \sin(t) = 0$
 $3 \sin(t) [4 \cos(t) + 3] = 0$
 $\sin t = 0$ or $\cos t = -\frac{3}{4}$
 $t = \pi; 0$ $138.6^\circ; 360^\circ - 138.6^\circ$

Equations with multiple angles $\theta = \frac{2}{18}, \frac{13\pi}{18}, \frac{25\pi}{18}, \frac{5\pi}{6}, \frac{11\pi}{6}$
 E.g. $2 \sin(3\theta) = 1$. Solve this with $0 \leq \theta < 2\pi$
 $\sin(3\theta) = \frac{1}{2}$; $3\theta = \frac{\pi}{6}$; $3\theta = \frac{5\pi}{6}$
 $3\theta = \frac{25\pi}{6}$ $3\theta = \frac{13\pi}{6}$ $3\theta = \frac{17\pi}{6}$ $3\theta = \frac{29\pi}{6}$



Sep 28-7:41 PM