

Daily Agenda

Learning Targets:

- I can use the properties of trig functions including sum/difference, even/odd, and double angles to prove a trig identity.
- I can solve trig equations in the indicated domain.

Homework	Assessments
Worksheet	Unit 8B Test - 3/17

Adopt the pace of nature; her secret is patience.  
-Ralph Waldo Emerson

Nov 15-8:24 PM

$$2) \cos 2x = \cos x \quad (0^\circ, 360^\circ)$$

$$\frac{2\cos^2 x - 1 = \cos x}{-\cos x \quad -\cos x}$$

$$2\cos^2 x - \cos x - 1 = 0$$

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

$2\cos x + 1 = 0$	$\cos x - 1 = 0$
$2\cos x = -1$	$\cos x = 1$
$\cos x = -\frac{1}{2}$	

$$x = 120^\circ, 240^\circ \quad x \neq 0^\circ$$

Mar 15-10:51 AM

⑤  $(\cos 2x \sin 25^\circ - \sin 2x \cos 25^\circ = \frac{\sqrt{3}}{2})$

$$\sin A \cos B - \cos A \sin B =$$

$$\sin 2x \cos 25^\circ - \cos 2x \sin 25^\circ = \frac{-\sqrt{3}}{2}$$

$$\sin(2x - 25^\circ) = \frac{-\sqrt{3}}{2}$$

$2x - 25^\circ = 240^\circ + 360n$	$2x - 25^\circ = 300^\circ + 360n$
$\frac{+25^\circ \quad +25^\circ}{2x = 265^\circ + 360n}$	$\frac{+25^\circ \quad +25^\circ}{2x = 325^\circ + 360n}$
$x = 132.5^\circ + 180n$	$x = 162.5^\circ + 180n$

$$x = 132.5^\circ, 312.5^\circ, 162.5^\circ, 342.5^\circ$$

Mar 15-10:56 AM

Solve the equation in the indicated domain

$$\frac{4\sin^2 x = 3}{4 \quad 4} \quad x \in [0^\circ, 360^\circ]$$

$$\sqrt{\sin^2 x} = \sqrt{\frac{3}{4}}$$

$$\sin x = \pm \frac{\sqrt{3}}{2}$$

$$x = 60^\circ, 120^\circ, 240^\circ, 300^\circ$$

Mar 15-9:06 AM

Solve the equation in the indicated domain

$$\cos 2x \cos 3x - \sin 2x \sin 3x = 1/2 \quad x \in [0^\circ, 360^\circ]$$

$$\cos(2x + 3x)$$

$$\cos 5x = \frac{1}{2}$$

$\frac{5x}{5} = \frac{60^\circ}{5} + \frac{360n}{5}$	$\frac{5x}{5} = \frac{300^\circ}{5} + \frac{360n}{5}$
$x = 12^\circ + 72n$	$x = 60^\circ + 72n$

$$x = 12^\circ, 84^\circ, 156^\circ, 228^\circ, 300^\circ$$

$$x = 60^\circ, 132^\circ, 204^\circ, 276^\circ, 348^\circ$$

Mar 15-9:06 AM