

Daily Agenda

Learning Target: I can use the sum and difference properties to find exact values of other trig functions.

Homework	Assessment
8.7 Worksheet Day 1	Unit 8B Test - 3/17

You must do the things you think you cannot do.
-Eleanor Roosevelt

Nov 15-8:24 PM

8.7 Sum/Difference Properties

$\sin(A+B) = \sin A \cos B + \cos A \sin B$
 $\sin(A-B) = \sin A \cos B - \cos A \sin B$
 $\cos(A+B) = \cos A \cos B - \sin A \sin B$
 $\cos(A-B) = \cos A \cos B + \sin A \sin B$

$\tan(A+B) = \frac{\tan A + \tan B}{1 - \tan A \tan B}$ $\tan(A-B) = \frac{\tan A - \tan B}{1 + \tan A \tan B}$

Mar 15-9:06 AM

Use the Sum/Difference Properties to find:

$\cos(15^\circ)$

$\cos(45^\circ - 30^\circ) = \cos 45^\circ \cos 30^\circ + \sin 45^\circ \sin 30^\circ$
 $\frac{\sqrt{2}}{2} \cdot \frac{\sqrt{3}}{2} + \frac{\sqrt{2}}{2} \cdot \frac{1}{2}$
 $\frac{\sqrt{6} + \sqrt{2}}{4}$

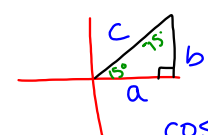
$\sec 15^\circ = \frac{4}{\sqrt{6} + \sqrt{2}} \cdot \frac{(\sqrt{6} - \sqrt{2})}{(\sqrt{6} - \sqrt{2})} = \frac{4\sqrt{6} - 4\sqrt{2}}{4}$

Mar 15-9:06 AM

Use the Sum/Difference Properties to find:

$\sin(75^\circ)$

$\sin(30^\circ + 45^\circ) = \sin 30^\circ \cos 45^\circ + \cos 30^\circ \sin 45^\circ$
 $\frac{1}{2} \cdot \frac{\sqrt{2}}{2} + \frac{\sqrt{3}}{2} \cdot \frac{1}{2}$
 $\frac{\sqrt{2} + \sqrt{6}}{4}$



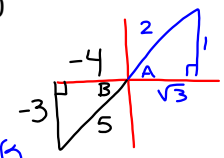
$\cos 15^\circ = \frac{a}{c}$ $\sin 75^\circ = \frac{a}{c}$

Mar 15-9:06 AM

Use the Sum/Difference Properties to find:

Given: $\sin A = 1/2$ and $\cos A > 0$
 $\tan B = 3/4$ and $\sin B < 0$

Find: $\sin(A-B)$



$\sin A \cos B - \cos A \sin B$
 $(\frac{1}{2})(\frac{-4}{5}) - (\frac{\sqrt{3}}{2})(\frac{-3}{5}) = \frac{-4 + 3\sqrt{3}}{10}$

Mar 15-9:06 AM

Use the Sum/Difference Properties to prove:

$\cos(x-90^\circ) = \sin x$

$\cos x \cos 90^\circ + \sin x \sin 90^\circ = \sin x$
 $\cos x \cdot 0 + \sin x \cdot 1 = \sin x$
 $\sin x = \sin x \checkmark$

Mar 15-9:06 AM