

Honors Algebra II/Trig
Unit 8 Review Day 2

Name: _____

Given that $\cos A = \frac{-8}{17}$, A terminates in Quadrant II, $\cos B = \frac{-5}{13}$, and B terminates in Quadrant III, find:

1. $\cos 2A$

2. $\sin 2A$

3. $\sin(A - B)$

4. $\cos(A - B)$

For problems #5-8, prove the identity.

5. $\frac{\cos 2x}{\cos x - \sin x} = \cos x + \sin x$

6. $\sin(x + 30^\circ) + \cos(x + 60^\circ) = \cos x$

7. $\tan x = \frac{1 - \cos 2x}{\sin 2x}$

8. $\cos 2x = \frac{1 - \tan^2 x}{1 + \tan^2 x}$

9. Find the exact value of $\cos 15^\circ$

10. Find the exact value of $\sin 105^\circ$.

For problems #11-13, solve the equation in the indicated domain.

11. $\sin 2x = \cos x$ $x \in [0, 2\pi)$

12. $\tan(x + 41^\circ) = 1$ $x \in [0, 360^\circ)$

13. $\sin x \cos 37^\circ = \cos x \sin 37^\circ$ $x \in [0, 360^\circ)$