

Use an appropriate sum or difference formula to find the exact value of each of the following. Show your work neatly organized. No calculators please.

1.  $\sin 75^\circ =$

2.  $\cos 75^\circ =$

3.  $\cos \frac{\pi}{12} =$

4.  $\sin \frac{7\pi}{12} =$

Use the given information to find the exact value of each of the following. Show your work neatly organized. No calculators please.

Given:  $\sin u = 0.4$  ;  $0 < u < .5\pi$

$\cos v = -0.96$  ;  $\pi < v < 1.5\pi$

5.  $\cos u =$

6.  $\sin v =$

7.  $\sin(u + v) =$

8.  $\cos(u - v) =$

Precalculus Worksheet #2 Unit 5 page 2

Use the given information to find the exact value of each of the following. Show your work neatly organized. No calculators please.

Given:  $\cos u = -2/5$  ;  $\pi < u < 1.5\pi$

9.  $\sin u =$

10.  $\sin 2u =$

Given:  $\sin u = 1/3$  ;  $0.5\pi < u < \pi$

11.  $\cos u =$

12.  $\cos 2u =$

Find the exact value of each of the following. Show your work neatly organized. No calculators please.

13.  $\cos(\arcsin(0.2)) =$

14.  $\sin(2\arcsin(0.2)) =$

Use the appropriate sum or difference formula to simplify each of the following. Show your work neatly organized. No calculators please.

15.  $\sin(x + \frac{\pi}{2}) =$

16.  $\cos(\pi - x) =$

17. Prove:  $\tan(u + v) = \frac{\tan u + \tan v}{1 - (\tan u)(\tan v)}$

18. Find all solutions of the equation  $\cos 2x = \sin x$  in the interval  $[0, 2\pi)$ . Show your work neatly organized. No calculators please.