Precalculus Worksheet #2 Chapter 6 page 1 _____

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 75º =

2. cos 75º =

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) =

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: $\tan(u + v) = \dfrac{\tan u + \tan v}{1 - (\tan u)(\tan v)}$

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.