

Name \_\_\_\_\_ Banner \_\_\_\_\_

Fall 2007

Quiz #11

Precalculus

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Sum Identities

$$\cos(\alpha + \beta) = \cos\alpha \cos\beta - \sin\alpha \sin\beta$$

$$\sin(\alpha + \beta) = \sin\alpha \cos\beta + \cos\alpha \sin\beta$$

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#1) Write  $\cos(2x)$  and  $\sin(2x)$  in terms of  $\sin(x)$  and  $\cos(x)$ .

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#2) Evaluate the following functions and give exact values:

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A)  $\sin(105^\circ)$

B)  $\cos(\pi/12)$

C)  $\tan(255^\circ)$

D)  $\sec(23\pi/12)$

**Extra Credit (25 points)**

**Find  $\cos(4x)$  in terms of  $\sin(x)$  and  $\cos(x)$ .**

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