Name:_____

Section:_____

MATH 120A
QUIZ 6
February 20, 2003

You may use a calculator to complete this quiz. No notes please. Show all work.

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1. (5 points) On your calculator, you can check that $\cos(36^\circ) = 0.8090$. How many angles ψ of measure between 300° and 750° will have $\cos\psi = 0.8090$?

2. (5 points) A bicyclist rides so that her speed is a sinusoidal function of time. At $t = 0$ minutes, she is riding at a rate of 25 mph, her maximum speed. Four minutes later, she is riding at her minimum speed of 12 mph for the first time. The cyclist's speed $S(t)$ after t minutes can be written as a sinusoidal function in standard form:

$$S(t) = A\sin\left[\frac{2\pi}{B}(t - C)\right] + D.$$

Give the values of A, B, C, and D.