Math 008B - Spring 2016

Quiz 1: Wednesday April 13, 2016

Quiz 2: Wednesday April 20, 2016

1. (5 points) Prove the following trigonometric identity:

$$\sec(x)\csc(x) = \tan(x) + \cot(x)$$

$$\sec(x)\csc(x) = \frac{1}{\cos(x)} \cdot \frac{1}{\sin(x)}$$

$$\sin^2 x + \cos^2 x = 1$$

$$= \frac{1}{\cos(x)\sin(x)}$$

$$= \frac{\cos^2(x) + \sin^2(x)}{\cos(x)\sin(x)}$$

$$= \frac{\cos^2(x)}{\cos(x)\sin(x)} + \frac{\sin^2(x)}{\cos(x)\sin(x)}$$

$$= \frac{\cos(x)}{\sin(x)} + \frac{\sin(x)}{\cos(x)}$$

$$= \cot(x) + \tan(x)$$

Please show all work.

**2.** (5 points) Graph the following function over one period
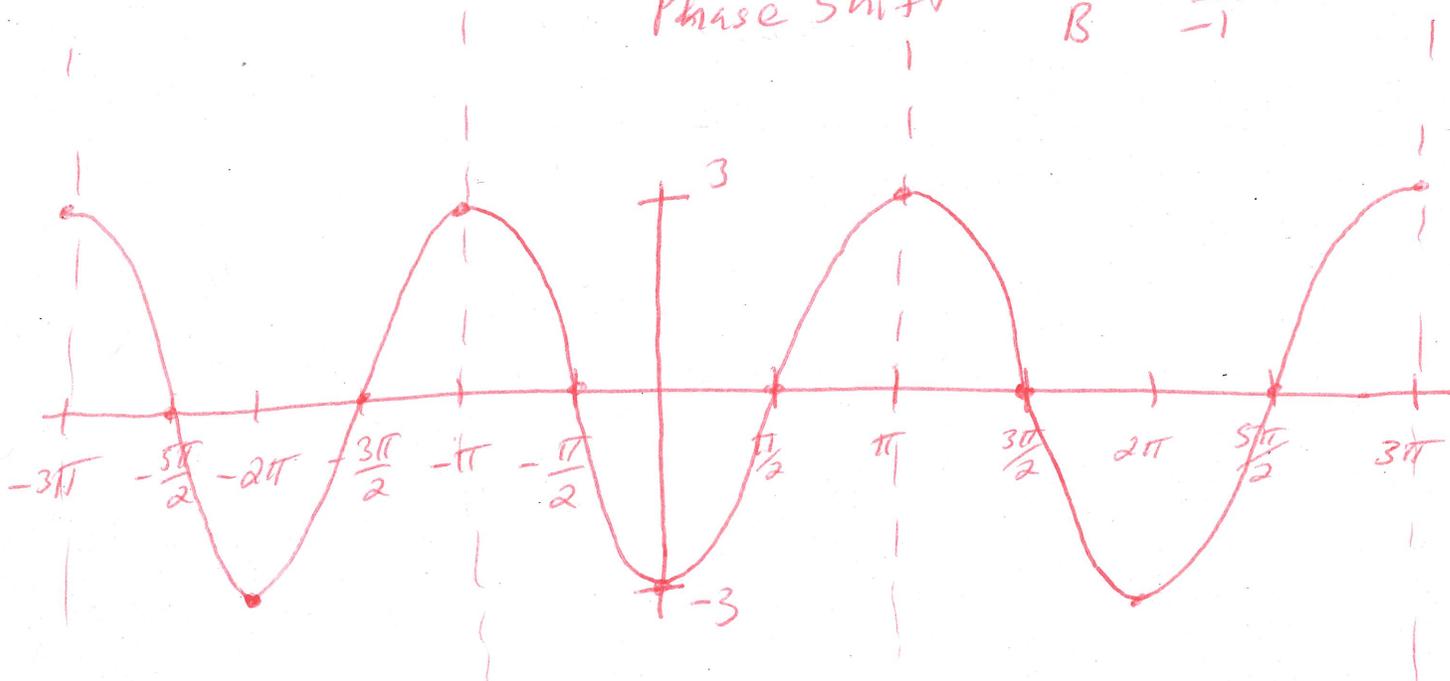
$$y(x) = 3\cos(-x + \pi)$$

$$y(x) = A\cos(Bx + C)$$

Amplitude = 3

Frequency = 1

Period = $\frac{2\pi}{|-1|}$ = $2\pi$

Phase shift = $\frac{C}{B}$ = $\frac{\pi}{-1}$ = $-\pi$



any of these 3 are okay for 1 period.

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Please show all work.