Lab06

Name: WebCT Administrator (Preview)

Start time: October 27, 2003 11:48am | Number of questions: 12

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This set of questions goes with the pages of applets and activities for Lab 06. Use the applets and activities there to answer the questions.

Question 1 (1 point)

Refer to lab page 2. Let angle CAD be represented as θ. What is angle C'A'D' ?

- a. $-\theta$
- b. $\theta + 45^o$
- c. $\theta + 90^o$
- d. $2\ \theta$

Save answer

Question 2 (1 point)

Refer to lab page 2. Match the cyan, magenta, yellow, and green lines with the appropriate trig functions.

1. cyan	a. $\sin\ \theta$
2. magenta	b. $\sin 2\ \theta$
3. yellow	c. $\cos\ \theta$
4. green	d. $\cos 2\ \theta$

1 --> Choose match
2 --> Choose match
3 --> Choose match
4 --> Choose match

Save answer

Question 3 (1 point)

Refer to lab page 2. Hit the Revolve D button and note what happens.

- a. angle C'A'D' goes through one revolution, angle CAD goes through 2 revolutions
- b. angle CAD goes through one revolution, angle C'A'D' goes through 2 revolutions
- c. angle CAD spins and spins
- d. angle CAD goes through half a revolution, angle C'A'D' goes through one revolution
- e. angle CAD goes through one revolution, angle C'A'D' goes through half a revolution

Save answer

Question 4 (1 point)

Refer to lab page 2. What is the period of the function y=cos(2x) ?

- a. $\pi/2$
- b. π
- c. 2π
- d. 4π

Save answer

Question 5 (1 point)

Refer to lab page 3. Use the utility to graph cos(2x). Now zoom in to find the x coordinate of the smallest positive x intercept. Answer accurate to three decimal places.

Answer

Save answer

Question 6 (1 point)

Refer to lab page 3. Refresh the grapher's display and plot $\cos(x)^2$ (the syntax for the grapher is cos(x)

^2). What is the period of $\cos(x)^2$?

- a. $\pi/2$
- b. π
- c. 2π
- d. 4π

Save answer

Question 7 (1 point)

Refer to lab page 3. Now plot $\cos(x)^2 - \sin(x)^2$ in the other color. What fact about the graph supports the fact that $\cos(2x) = \cos(x)^2 - \sin(x)^2$ is a trig identity?

- a. The graph is identically 0
- b. The graph is identically 1
- c. The graph coincides with the graph of sin(2x)
- d. The graph coincides with the graph of cos(2x)
- e. The graph matches the graph of (cos(x)-sin(x))(cos(x)+sin(x))

Save answer

Question 8 (.5 points)

Use the grapher on page 3. What right hand side f(x) makes $(\cos x)^2 (1 + (\tan x)^2) = f(x)$ an identity?

- a. -1
- b. 0
- c. 1
- d. $(\sin x)^2$
- e. $(\cot x)^2$

Save answer

Question 9 (.5 points)

Use the grapher on page 3. What right hand side f(x) makes sin(π /2 + x) = f(x) an identity?

- a. sin x
- b. - sin x
- c. cos x
- d. -cos x
- e. π /2 + sin x
- f. π /2 + cos x

Save answer

Question 10 (.5 points)

Use the grapher on page 3. What right hand side $f(x)$ makes 1 - $(\cos x)^2$ /(1 + sin x) = $f(x)$ an identity?

- a. -1
- b. 0
- c. 1
- d. sin x
- e. cos x
- f. -sin x
- g. -cos x

Save answer

Question 11 (.5 points)

Use the grapher on page 3. What right hand side $f(x)$ makes $(\cos x)^4$ - $(\sin x)^4$ = $f(x)$ an identity?

- a. sin x
- b. cos x
- c. sin x/2
- d. cos x/2
- e. sin 2x
- f. cos 2x

Save answer

Question 12 (1 point)

Use the grapher on page 3. For a between -10 and 10 there are three values of a in the list below for which $\sin x = \cos(x - a)$. What are they?

- ☐ a. -7.28
- ☐ b. -4.66
- ☐ c. -2.72
- ☐ d. 1.553
- ☐ e. 1.784
- ☐ f. 3.143
- ☐ g. 6.286
- ☐ h. 7.864

Save answer

Finish Help