

WeBWorK assignment number MPT_Practice_Trig_2011 is due : 09/14/2012 at 11:00pm PDT.

The following link

<http://mathweb1.sandbox.csun.edu/mpt/>

contains other important information about this course.

The primary purpose of WeBWorK is to let you know that you are getting the correct answer or to alert you if you are making some kind of mistake. Usually you can attempt a problem as many times as you want before the due date. However, if you are having trouble figuring out your error, you should consult the book, or ask a fellow student, one of the TA's or your professor for help. Don't spend a lot of time guessing – it's not very efficient or effective.

Give 4 or 5 significant digits for (floating point) numerical answers. For most problems when entering numerical answers, you can if you wish enter elementary expressions such as $2 \wedge 3$ instead of 8, $\sin(3 * \pi/2)$ instead of -1, $e \wedge (\ln(2))$ instead of 2, $(2 + \tan(3)) * (4 - \sin(5)) \wedge 6 - 7/8$ instead of 27620.3413, etc. Here's the list of the functions which WeBWorK understands.

You can use the Feedback button on each problem page to send e-mail to the professors.

1. (1 pt) Convert $\frac{6}{7}\pi$ in radians to degrees: _____.

Answer(s) submitted:

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(incorrect)

3. (1 pt) Evaluate the following expressions.

Note: Your answer must be in EXACT form: it cannot contain decimal numbers. Give the answer either as an integer or a fraction. If the answer involves a square root write it as *sqrt* . For instance, the square root of 2 should be written as *sqrt(2)*.

If $\theta = \frac{-4\pi}{3}$, then

$\sin(\theta) =$ _____

$\cos(\theta) =$ _____

$\tan(\theta) =$ _____

$\sec(\theta) =$ _____

Answer(s) submitted:

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(incorrect)

4. (1 pt) For the acute angle θ with $\sin \theta = 3/5$, find

$\cos \theta =$ _____.

$\tan \theta =$ _____.

$\cot \theta =$ _____.

$\sec \theta =$ _____.

$\csc \theta =$ _____.

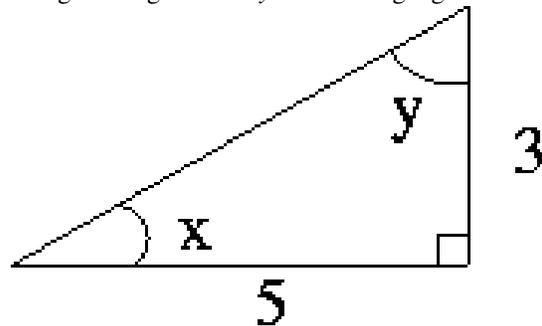
Answer(s) submitted:

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(incorrect)

5. (1 pt) Click on the graph to view a larger graph

For the given angles x and y in the triangle given in the graph



$\sin x =$ _____ and $\cos y =$ _____;

$\tan x =$ _____ and $\cot y =$ _____;

$\sec x =$ _____ and $\csc y =$ _____;

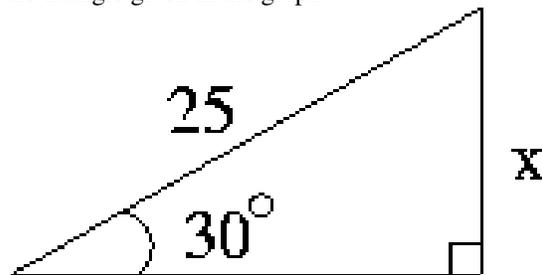
Answer(s) submitted:

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(incorrect)

6. (1 pt) Click on the graph to view a larger graph

In the triangle given in the graph

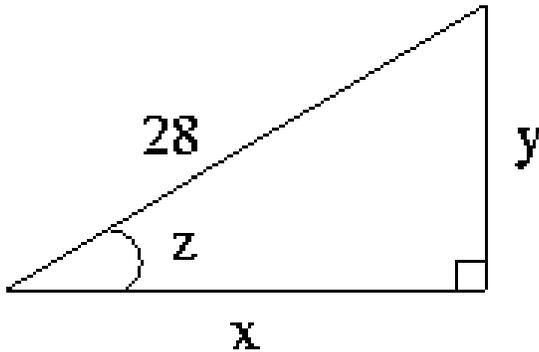


the length of the side $x =$ _____.

Answer(s) submitted:

(incorrect)

7. (1 pt) Click on the graph to view a larger graph



In the triangle given above, express x and y in terms of trigonometric ratios of the angle z .

$x = \underline{\hspace{2cm}}$.

$y = \underline{\hspace{2cm}}$.

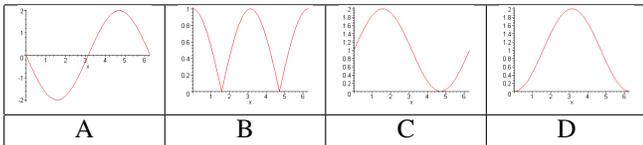
Answer(s) submitted:

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(incorrect)

8. (1 pt) Match the functions with their graphs. Enter the letter of the graph below which corresponds to the function. (Click on image for a larger view)

- ___1. $y = |\cos x|$
- ___2. $y = 1 - \cos x$
- ___3. $y = -2 \sin x$
- ___4. $y = 1 + \sin x$



Answer(s) submitted:

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(incorrect)

9. (1 pt) Find all solutions of the equation $2 \sin^2 x - \cos x = 1$ in the interval $[0, 2\pi)$.

The answer is $x = \underline{\hspace{2cm}}$.

Note: If there is more than one solution, enter them separated by commas. If needed enter π as pi.

Answer(s) submitted:

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(incorrect)

10. (1 pt) Solve the following equations in the interval $[0, 2\pi)$.

Note: Give the answer as a multiple of π . Do not use decimal numbers. The answer should be a fraction or an integer. Note that π is already included in the answer so you just have to enter the appropriate multiple. E.g. if the answer is $\pi/2$ you should enter 1/2. If there is more than one answer enter them separated by commas.

$\sin(t) = \frac{\sqrt{2}}{2}$

$t = \underline{\hspace{1cm}} \pi$

$\sin(t) = -\frac{\sqrt{3}}{2}$

$t = \underline{\hspace{1cm}} \pi$

Answer(s) submitted:

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(incorrect)

11. (1 pt) Solve the given equation in the interval $[0, 2\pi)$.

Note: The answer must be written as a multiple of π . Give exact answers. Do not use decimal numbers. The answer must be an integer or a fraction. Note that π is already provided with the answer so you just have to find the appropriate multiple. E.g. if the answer is $\frac{\pi}{2}$ you should enter 1/2. If there is more than one answer write them separated by commas.

$2(\sin x)^2 - 5 \cos x + 1 = 0$

$x = \underline{\hspace{1cm}} \pi$

Answer(s) submitted:

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(incorrect)

12. (1 pt) Solve the following equations in the interval $[0, 2\pi)$.

Note: Give the answer as a multiple of π . Do not use decimal numbers. The answer should be a fraction or an integer. Note that π is already included in the answer so you just have to enter the appropriate multiple. E.g. if the answer is $\pi/2$ you should enter 1/2. If there is more than one answer enter them separated by commas.

$\cos(t) = -\frac{\sqrt{3}}{2}$

$t = \underline{\hspace{1cm}} \pi$

$\cos(t) = \frac{\sqrt{2}}{2}$

$t = \underline{\hspace{1cm}} \pi$

Answer(s) submitted:

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(incorrect)

13. (1 pt) Find all solutions of the equation $3 \sin^2 x - 7 \sin x + 2 = 0$ in the interval $[0, 2\pi)$.

The answer is $x = \underline{\hspace{2cm}}$

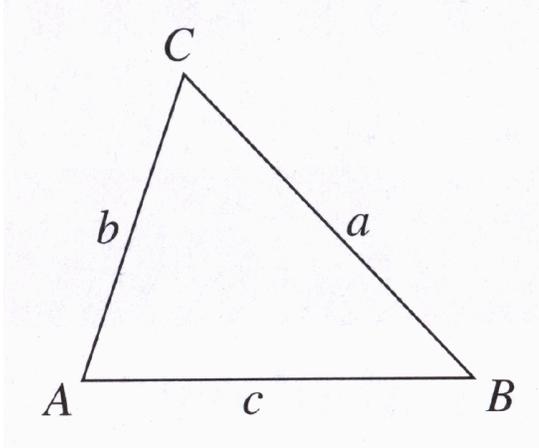
If there is more than one solution enter them separated by commas.

If needed enter π as pi.

Answer(s) submitted:

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(incorrect)

14. (1 pt) In this and the following problems we consider general (not necessarily or usually right) triangles and use the notation described on p. 494 of the textbook, and indicated in this Figure:



The angles are labeled A , B , and C , and the sides opposite these angles have lengths a , b , and c , respectively. In abstract problems the lengths aren't specified in any particular units, but we assume that the units are same for all lengths involved.

Suppose you are given a triangle with

$$a = 4, \quad b = 7, \quad c = 10.$$

Then

$A =$ _____degrees,

$B =$ _____degrees, and

$C =$ _____degrees.

Enter your answers with two digits beyond the decimal point.

Answer(s) submitted:

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(incorrect)

15. (1 pt) You leave your friend behind on the shore and you travel 3 miles due east in your boat. Then you travel 2 miles northeast. Then you travel 1 mile due north. Your friend can see you at a distance of _____ miles and at a bearing of _____degrees.

Enter your answers with at least 3 digits beyond the decimal point.

Hint: Carefully draw a picture. Use the Laws of Sines and Cosines.

Answer(s) submitted:

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(incorrect)