Description
This is the review for Exam #2. Please work as many problems as possible before we review in-class. As always, if you need anything, please email me
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1. Question Details SPreCalc6 5.1.009. [2684190]

Find the missing coordinate of P, using the fact that P lies on the unit circle in the given quadrant.

Coordinates	Quadrant
$P\left(-\frac{5}{13}, -\frac{12}{13}\right)$	III

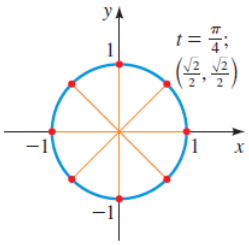
2. Question Details SPreCalc6 5.1.011. [2684220]

Find the missing coordinate of P, using the fact that P lies on the unit circle in the given quadrant.

Coordinates	Quadrant
$P\left(-\frac{4\sqrt{5}}{9}, \frac{1}{9}\right)$	II

3. Question Details SPreCalc6 5.1.021. [1713018]

Consider the following.

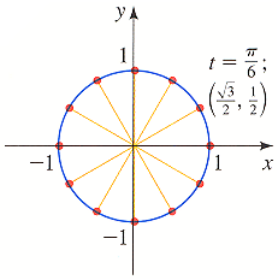


Find t and the terminal point determined by t for each point in the figure, where t is increasing in increments of $\pi/4$.

t	Terminal Point
0	$(1, 0)$
$\frac{\pi}{4}$	$\left(\frac{\sqrt{2}}{2}, \frac{\sqrt{2}}{2}\right)$
$\frac{\pi}{2}$	$(0, 1)$
$\frac{3\pi}{4}$	$\left(-\frac{\sqrt{2}}{2}, \frac{\sqrt{2}}{2}\right)$
π	$(-1, 0)$
$\frac{5\pi}{4}$	$\left(-\frac{\sqrt{2}}{2}, -\frac{\sqrt{2}}{2}\right)$
$\frac{3\pi}{2}$	$(0, -1)$
$\frac{7\pi}{4}$	$\left(\frac{\sqrt{2}}{2}, -\frac{\sqrt{2}}{2}\right)$
2π	$(1, 0)$

4. Question Details SPreCalc6 5.1.022. [1713072]

Consider the following.

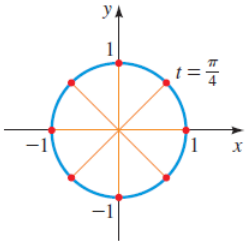


Find t and the terminal point determined by t for each point in the figure, where t is increasing in increments of $\pi/6$.

t	Terminal Point
0	$(1, 0)$
$\frac{\pi}{6}$	$\left(\frac{\sqrt{3}}{2}, \frac{1}{2}\right)$
$\frac{\pi}{3}$	$\left(\frac{1}{2}, \frac{\sqrt{3}}{2}\right)$
$\frac{\pi}{2}$	$(0, 1)$
$\frac{2\pi}{3}$	$\left(-\frac{1}{2}, \frac{\sqrt{3}}{2}\right)$
$\frac{5\pi}{6}$	$\left(-\frac{\sqrt{3}}{2}, \frac{1}{2}\right)$
π	$(-1, 0)$
$\frac{7\pi}{6}$	$\left(-\frac{\sqrt{3}}{2}, -\frac{1}{2}\right)$
$\frac{4\pi}{3}$	$\left(-\frac{1}{2}, -\frac{\sqrt{3}}{2}\right)$
$\frac{3\pi}{2}$	$(0, -1)$
$\frac{5\pi}{3}$	$\left(\frac{1}{2}, -\frac{\sqrt{3}}{2}\right)$
$\frac{11\pi}{6}$	$\left(\frac{\sqrt{3}}{2}, -\frac{1}{2}\right)$
2π	$(1, 0)$

5. Question Details SPreCalc6 5.2.003. [2694129]

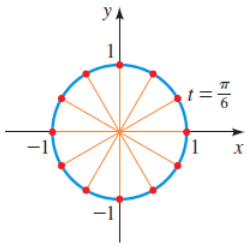
Find sin t and cos t for the values of t whose terminal points are shown on the unit circle in the figure. t increases in increments of $\pi/4$.



t	sin t	cos t
0	0	1
$\frac{\pi}{4}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{2}}{2}$
$\frac{\pi}{2}$	1	0
$\frac{3\pi}{4}$	$\frac{\sqrt{2}}{2}$	$-\frac{\sqrt{2}}{2}$
π	0	-1
$\frac{5\pi}{4}$	$-\frac{\sqrt{2}}{2}$	$-\frac{\sqrt{2}}{2}$
$\frac{3\pi}{2}$	-1	0
$\frac{7\pi}{4}$	$-\frac{\sqrt{2}}{2}$	$\frac{\sqrt{2}}{2}$

6. Question Details SPreCalc6 5.2.004. [2694159]

Find sin t and cos t for the values of t whose terminal points are shown on the unit circle in the figure. t increases in increments of $\pi/6$.



t	sin t	cos t
0	0	1
$\frac{\pi}{6}$	$\frac{1}{2}$	$\frac{\sqrt{3}}{2}$
$\frac{\pi}{3}$	$\frac{\sqrt{3}}{2}$	$\frac{1}{2}$
$\frac{\pi}{2}$	1	0
$\frac{2\pi}{3}$	$\frac{\sqrt{3}}{2}$	$-\frac{1}{2}$
$\frac{5\pi}{6}$	$\frac{1}{2}$	$-\frac{\sqrt{3}}{2}$
π	0	-1
$\frac{7\pi}{6}$	$-\frac{1}{2}$	$-\frac{\sqrt{3}}{2}$
$\frac{4\pi}{3}$	$-\frac{\sqrt{3}}{2}$	$-\frac{1}{2}$
$\frac{3\pi}{2}$	-1	0
$\frac{5\pi}{3}$	$-\frac{\sqrt{3}}{2}$	$\frac{1}{2}$
$\frac{11\pi}{6}$	$-\frac{1}{2}$	$\frac{\sqrt{3}}{2}$

7. Question Details SPreCalc6 5.2.011. [1776239]

Find the exact value of the trigonometric function at the given real number.

(a) $\sin \frac{11\pi}{4}$

$\frac{\sqrt{2}}{2}$

(b) $\csc \frac{11\pi}{4}$

$\sqrt{2}$

(c) $\cot \frac{11\pi}{4}$

-1

8. Question Details SPreCalc6 5.2.012. [1776283]

Find the exact value of the trigonometric function at the given real number.

(a) $\cos\left(-\frac{\pi}{3}\right)$

$\frac{1}{2}$

(b) $\sec\left(-\frac{\pi}{3}\right)$

2

(c) $\tan\left(-\frac{\pi}{3}\right)$

$-\sqrt{3}$

9. Question Details SPreCalc6 5.2.015. [1776309]

Find the exact value of the trigonometric function at the given real number.

(a) $\sec\frac{11\pi}{3}$

2

(b) $\csc\frac{11\pi}{3}$

$-\frac{2\sqrt{3}}{3}$

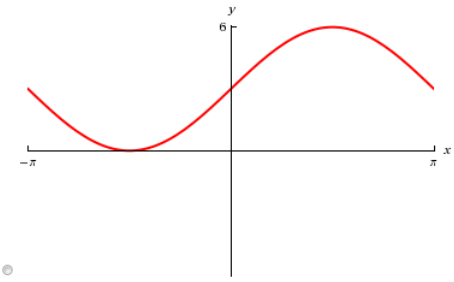
(c) $\sec\left(-\frac{\pi}{6}\right)$

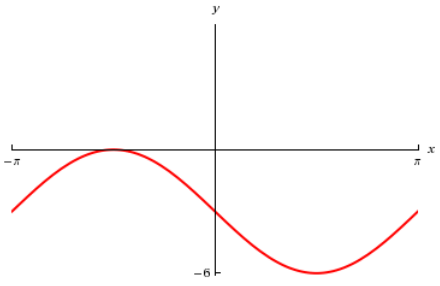
$\frac{2\sqrt{3}}{3}$

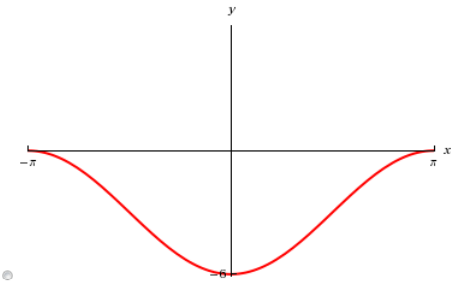
10. Question Details SPreCalc6 5.3.013. [1775018]

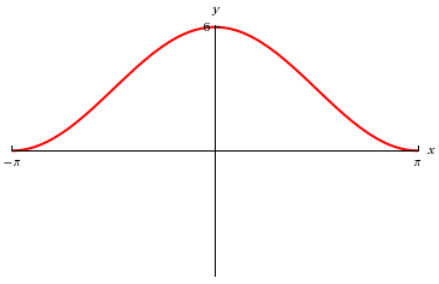
Graph the function.

$g(x) = 3 + 3\cos x$









11. Question Details SPreCalc6 5.3.017. [2708815]

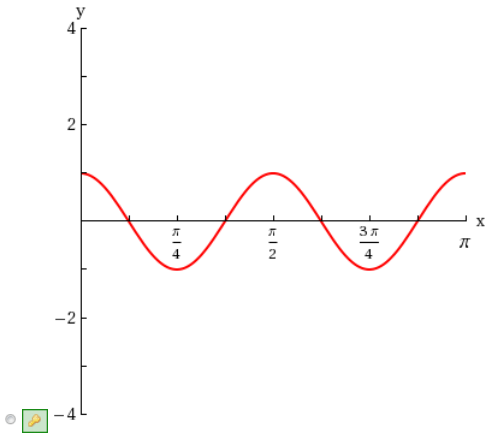
Find the amplitude and period of the function.

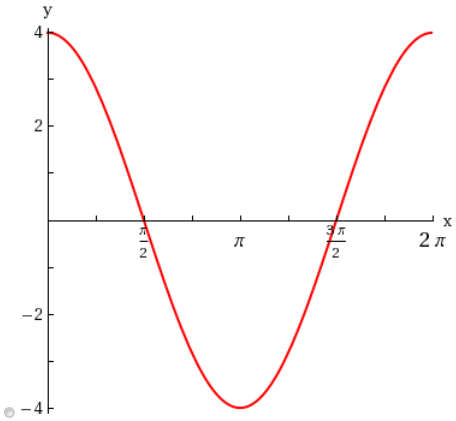
$y = \cos 4x$

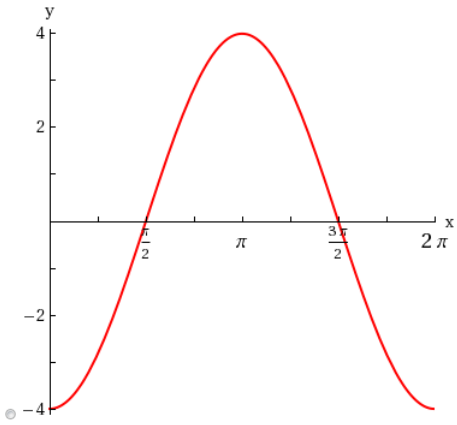
amplitude [ ] 1

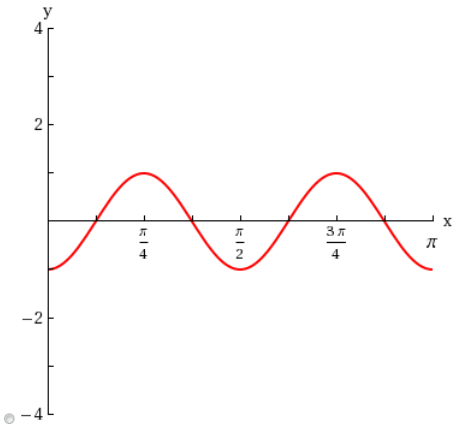
period $\frac{\pi}{2}$

Sketch the graph of the function.









12. Question Details SPreCalc6 5.3.020.MI. [2760396]

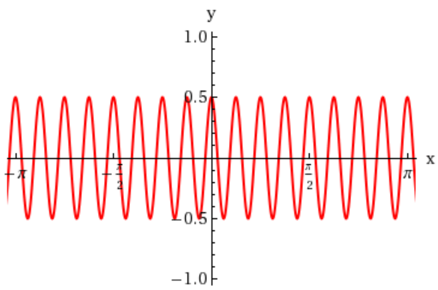
Find the amplitude and period of the function.

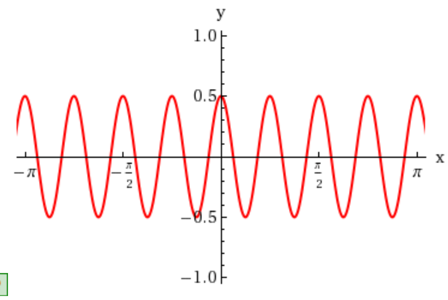
$$y = \frac{1}{2} \cos 8x$$

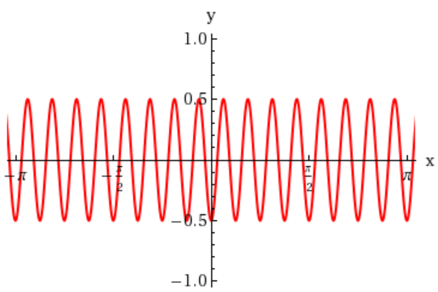
amplitude [ ] 1/2

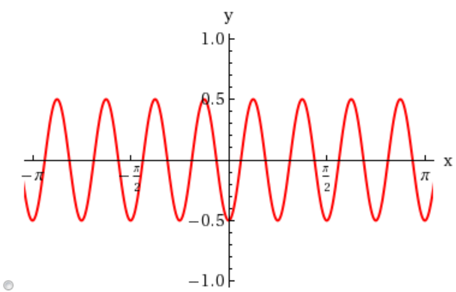
period $\frac{\pi}{4}$

Sketch the graph of the function.









13. Question Details SPreCalc6 5.3.021. [2708766]

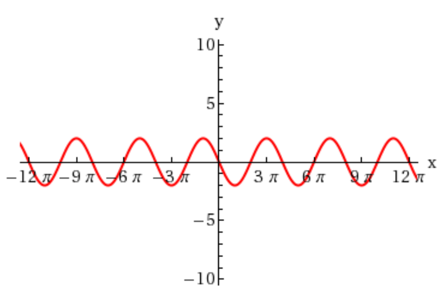
Find the amplitude and period of the function.

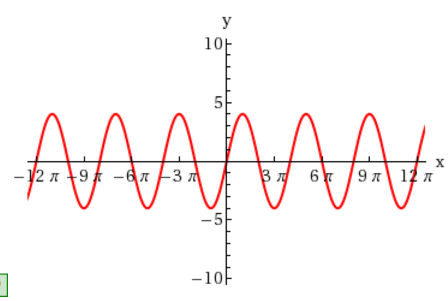
$$y = 4 \sin \frac{1}{2}x$$

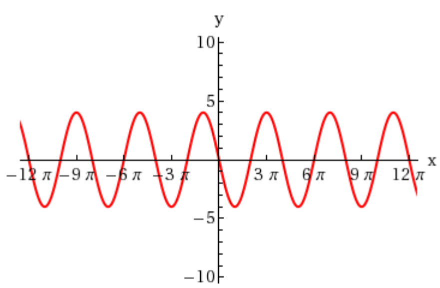
amplitude [ ] 4

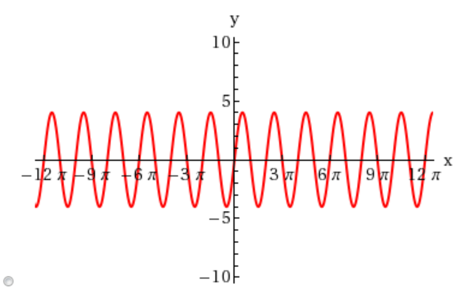
period 4π

Sketch the graph of the function.







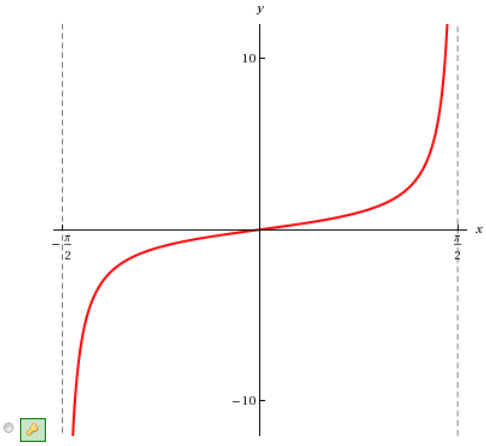


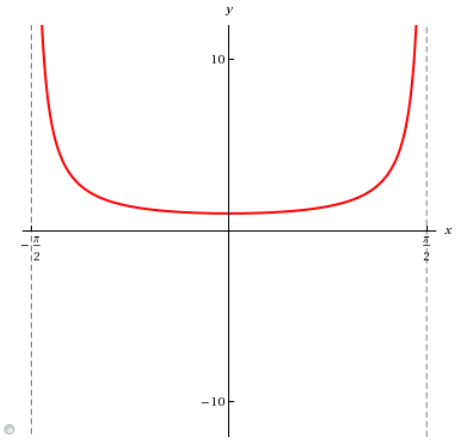
14. Question Details SPreCalc6 5.4.001. [1716533]

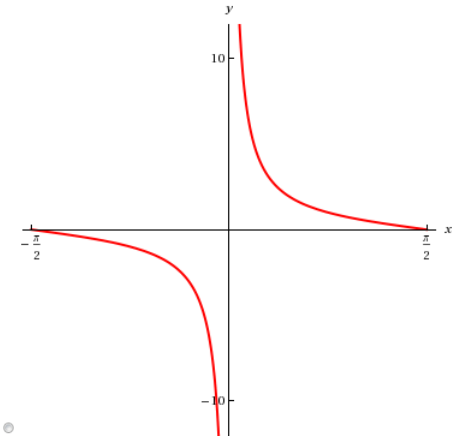
The trigonometric function $y = \tan x$ has period π and the following asymptotes.

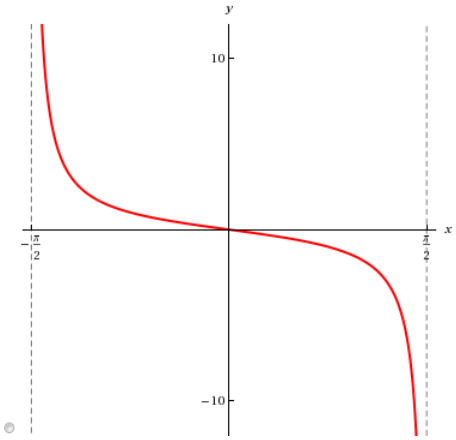
- $x = n\pi$ (n is an integer)
- $x = \frac{\pi}{2} + 2n\pi$ (n is an integer)
- $x = \frac{\pi}{2} + n\pi$ (n is an integer)
- $x = \frac{3\pi}{2} + 2n\pi$ (n is an integer)
- $x = 2n\pi$ (n is an integer)

Sketch a graph of this function on the interval $(-\pi/2, \pi/2)$.







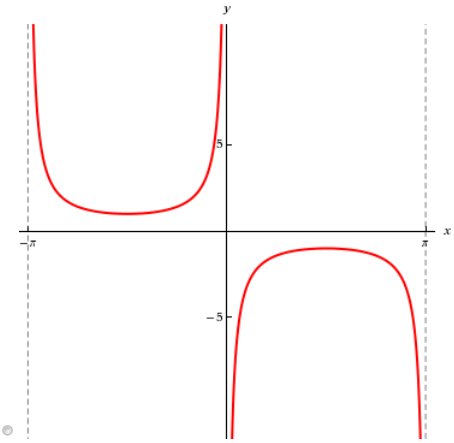


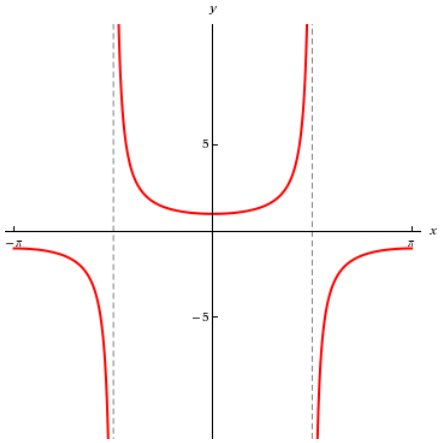
15. Question Details SPreCalc6 5.4.002. [1716581]

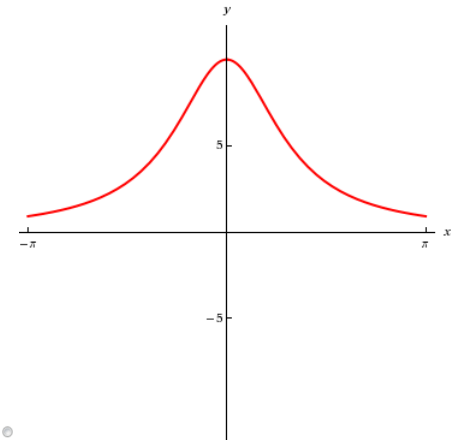
The trigonometric function $y = \csc x$ has period 2π and the following asymptotes.

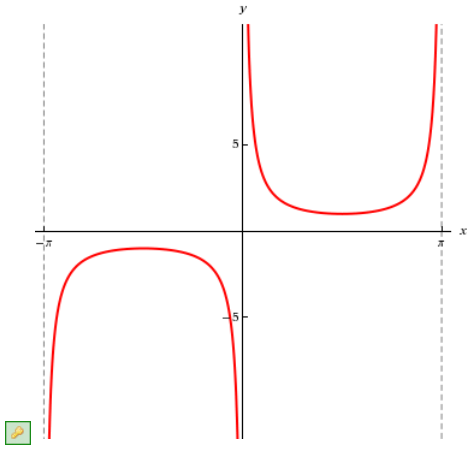
- $x = n\pi$ (n is an integer)
- $x = \frac{3\pi}{2} + 2n\pi$ (n is an integer)
- $x = \frac{\pi}{2} + 2n\pi$ (n is an integer)
- $x = (2n+1)\pi$ (n is an integer)
- $x = \frac{\pi}{2} + n\pi$ (n is an integer)

Sketch a graph of this function on the interval $(-\pi, \pi)$.









16. Question Details SPreCalc6 6.1.004. [1776344]

Find the radian measure of the angle with the given degree measure.

18°

$\frac{\pi}{10}$ rad

17. Question Details SPreCalc6 6.1.015. [1776296]

Find the degree measure of the angle with the given radian measure.

$\frac{\pi}{6}$

[ ] 30 °

18. Question Details SPreCalc6 6.1.028.MI. [2655628]

The measure of an angle in standard position is given. Find two positive angles and two negative angles that are coterminal with the given angle. (Enter your answers as a comma-separated list.)

225°

$-495, -135, 585, 945$ °

19. Question Details SPreCalc6 6.1.030. [1776286]

The measure of an angle in standard position is given. Find two positive angles and two negative angles that are coterminal with the given angle. (Enter your answers as a comma-separated list.)

$\frac{5\pi}{6}$

$-\frac{19\pi}{6}, -\frac{7\pi}{6}, \frac{17\pi}{6}, \frac{29\pi}{6}$ rad

20. Question Details SPreCalc6 6.2.033. [2748536]

Solve the right triangle.

47°

Find the length of the side opposite to the given angle. (Round your answer to two decimal places.)

37.53

Find the length of the hypotenuse. (Round your answer to two decimal places.)

51.32

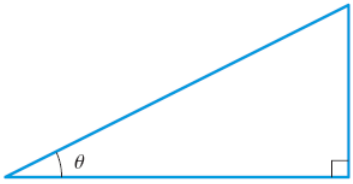
Find the other acute angle.

43 °

21. Question Details SPreCalc6 6.2.039. [1762588]

You conclude a triangle is 3 cm long and 2.5 tall. Use these measurements to estimate the six trigonometric ratios of θ. (Round your answers to two decimal places.)

sin θ = 0.64
cos θ = 0.77
tan θ = 0.83
csc θ = 1.56
sec θ = 1.30
cot θ = 1.20



22. Question Details SPreCalc6 6.3.036.MI. [2678450]

Find the quadrant in which θ lies from the information given.

$\tan\theta < 0$ and $\sin\theta > 0$

- I
- II
- III
- IV

23. Question Details SPreCalc6 6.3.045-052.501.XP.MI. [1870975]

Find the values of the six trigonometric functions of θ with the given constraint.

Function Value	*Constraint*
$\cos(\theta) = -7/25$	θ lies in Quadrant III

$\sin(\theta)$ = [ ] -24/25
$\cos(\theta)$ = [ ] -7/25
$\tan(\theta)$ = [ ] 24/7
$\csc(\theta)$ = [ ] -25/24
$\sec(\theta)$ = [ ] -25/7
$\cot(\theta)$ = [ ] 7/24

24. Question Details SPreCalc6 6.3.046. [2708293]

Find the values of the trigonometric functions of θ from the information given.

$\cos\theta = -\frac{7}{12}$, θ in Quadrant III

$\sin\theta$ = $-\frac{\sqrt{95}}{12}$
$\tan\theta$ = $\frac{\sqrt{95}}{7}$
$\csc\theta$ = $-\frac{12}{\sqrt{95}}$
$\sec\theta$ = $-\frac{12}{7}$
$\cot\theta$ = $\frac{7}{\sqrt{95}}$

25. Question Details SPreCalc6 6.5.001. [1763555]

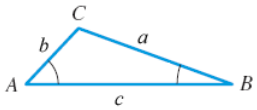
In triangle ABC with sides a, b, and c the Law of Sines states that

$\frac{\text{---Select---}\ \sin A}{a} = \frac{\text{---Select---}\ \sin B}{b} = \frac{\text{---Select---}\ \sin C}{c}$.

26. Question Details SPreCalc6 6.5.009. [1763578]

Solve the triangle using the Law of Sines. (Assume $c = 65$, $\angle A = 55°$, and $\angle B = 25°$. Round lengths to two decimal places.)

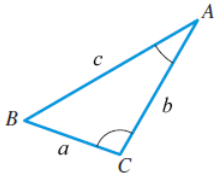
a = [ ] 54.07
b = [ ] 27.89
$\angle C$ = [ ] 100 °



27. Question Details SPreCalc6 6.5.010.MI. [2678462]

Solve the triangle using the Law of Sines. (Assume $b = 5$, $\angle A = 40°$, and $\angle C = 100°$. Round the lengths to two decimal places.)

a = [ ] 5.00
c = [ ] 7.66
$\angle B$ = [ ] 40 °



28. Question Details SPreCalc6 6.6.001. [2715786]

For triangle *ABC* with sides *a*, *b*, and *c* the Law of Cosines states the following.

$c^2 =$ $a^2 + b^2 - 2ab\cos(C)$

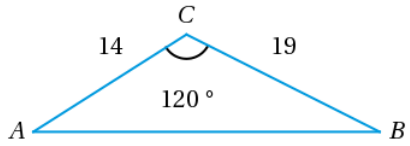
29. Question Details SPreCalc6 6.6.011. [2563604]

Solve triangle *ABC*. (Round the length to three decimal places and the angles to one decimal place.)

$c =$ 28.688

$\angle A =$ 35.0 °

$\angle B =$ 25.0 °



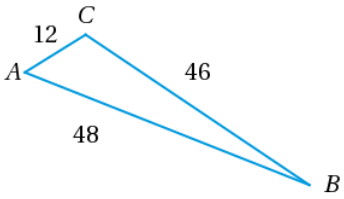
30. Question Details SPreCalc6 6.6.012. [1765855]

Solve triangle *ABC*. (Round your answers to one decimal place.)

$\angle A =$ 73.3 °

$\angle B =$ 14.5 °

$\angle C =$ 92.3 °



Assignment Details