

Question

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

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 Joshua.Patterson@tamuc.edu

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
$P\left(-\frac{5}{13}, \quad\right)$	III

2. Question Details

SPreCalc6 5.1.011. [2684220]

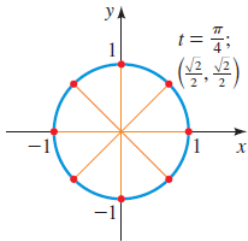
Find the missing coordinate of P , using the fact that P lies on the unit circle in the given quadrant.

Coordinates	Quadrant
$P\left(\quad, \frac{1}{9}\right)$	II

3. Question Details

SPreCalc6 5.1.021. [1713018]

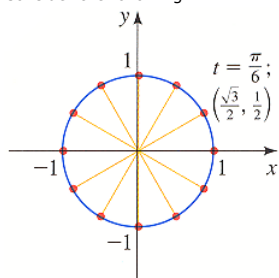
Consider the following.



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	(\quad, \quad)
$\frac{\pi}{4}$	$\left(\frac{\sqrt{2}}{2}, \frac{\sqrt{2}}{2}\right)$
	(\quad, \quad)
	(\quad, \quad)
	(\quad, \quad)
	(\quad, \quad)
	(\quad, \quad)
	(\quad, \quad)
2π	(\quad, \quad)

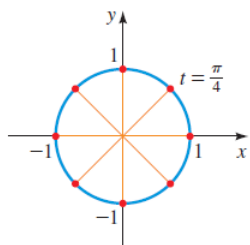
Consider the following.



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

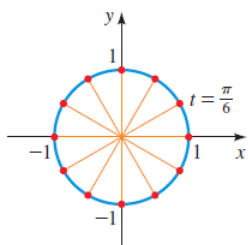
t	Terminal Point
0	()
$\frac{\pi}{6}$	$(\frac{\sqrt{3}}{2}, \frac{1}{2})$
	()
	()
	()
	()
	()
	()
	()
	()
	()
	()
2π	()

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		
$\frac{\pi}{4}$		
$\frac{\pi}{2}$		
$\frac{3\pi}{4}$		
π		
$\frac{5\pi}{4}$		
$\frac{3\pi}{2}$		
$\frac{7\pi}{4}$		

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		
$\frac{\pi}{6}$		
$\frac{\pi}{3}$		
$\frac{\pi}{2}$		
$\frac{2\pi}{3}$		
$\frac{5\pi}{6}$		
π		
$\frac{7\pi}{6}$		
$\frac{4\pi}{3}$		
$\frac{3\pi}{2}$		
$\frac{5\pi}{3}$		
$\frac{11\pi}{6}$		

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

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

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

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

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

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

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

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

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

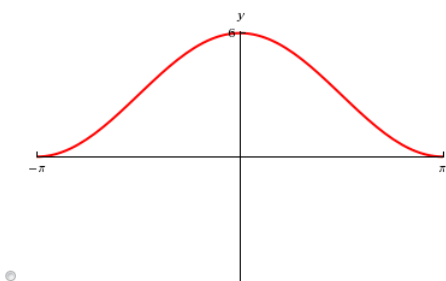
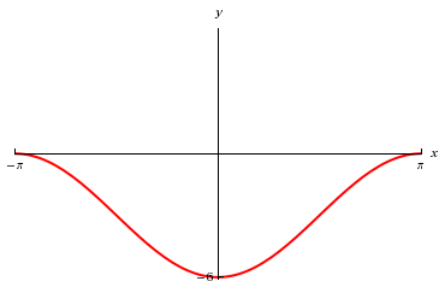
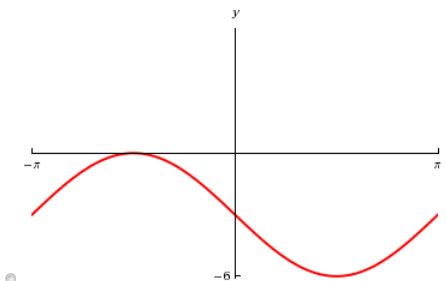
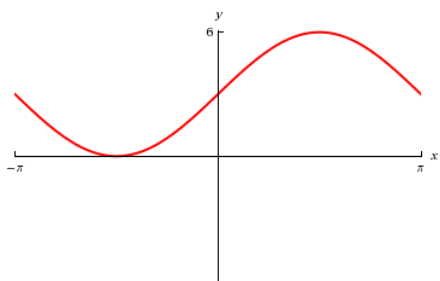
(a) $\sec\frac{11\pi}{3}$

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

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

Graph the function.

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



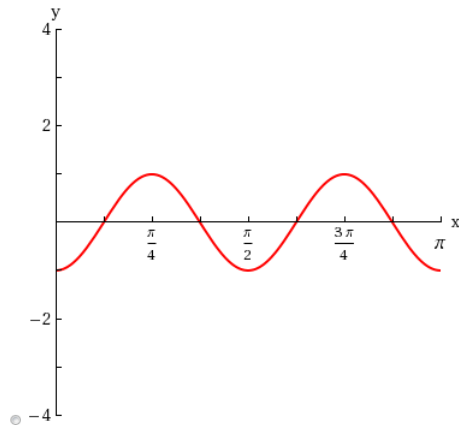
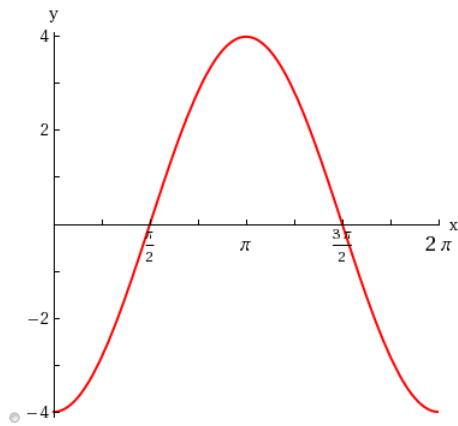
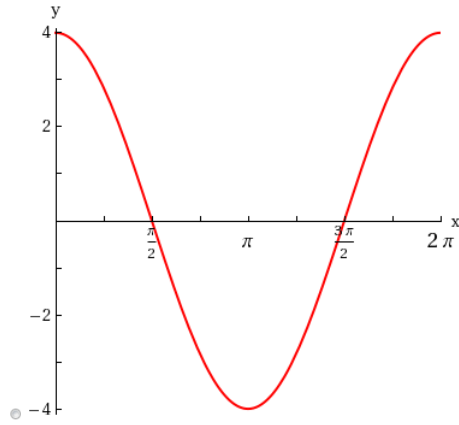
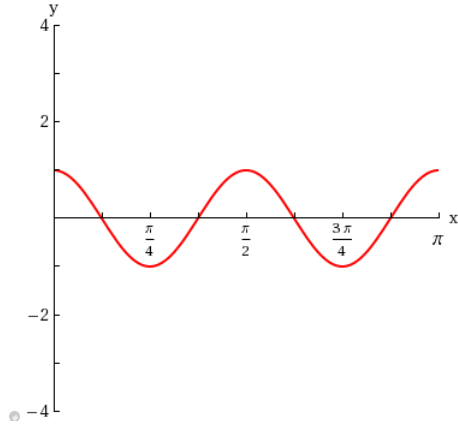
Find the amplitude and period of the function.

$$y = \cos 4x$$

amplitude

period

Sketch the graph of the function.



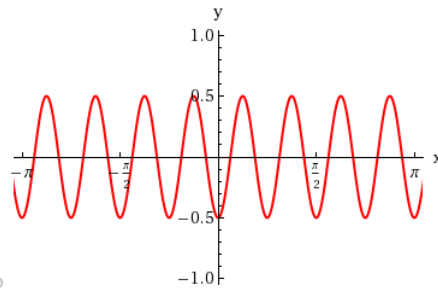
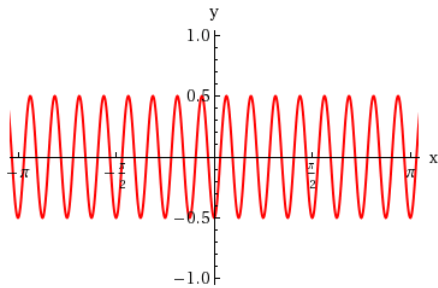
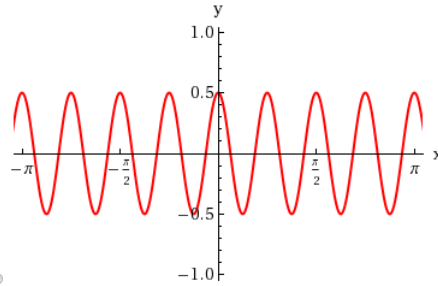
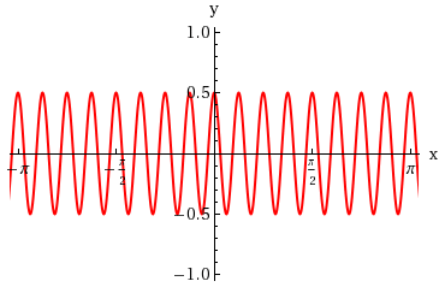
Find the amplitude and period of the function.

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

amplitude

period

Sketch the graph of the function.



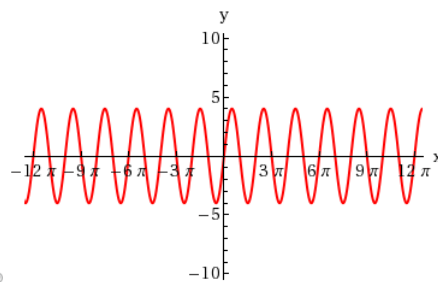
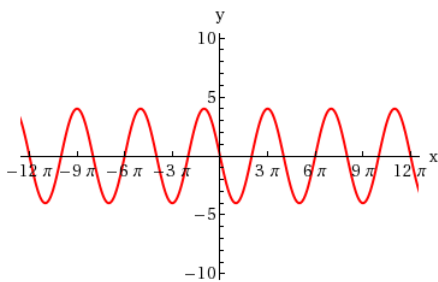
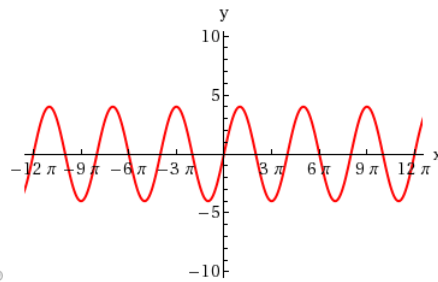
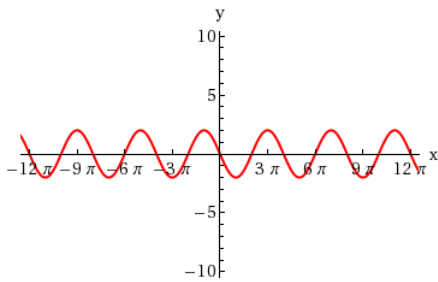
Find the amplitude and period of the function.

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

amplitude

period

Sketch the graph of the function.

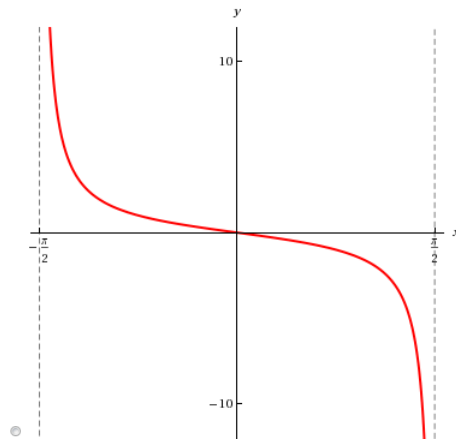
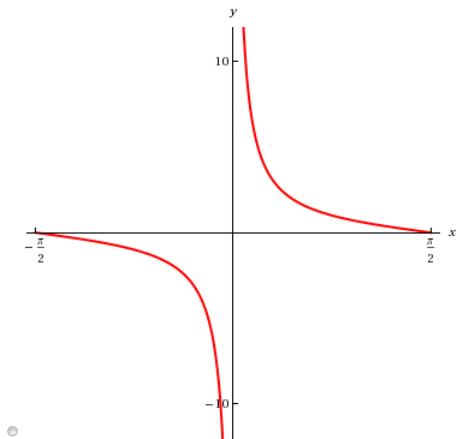
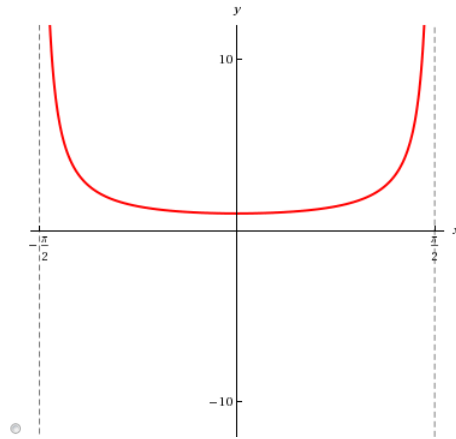
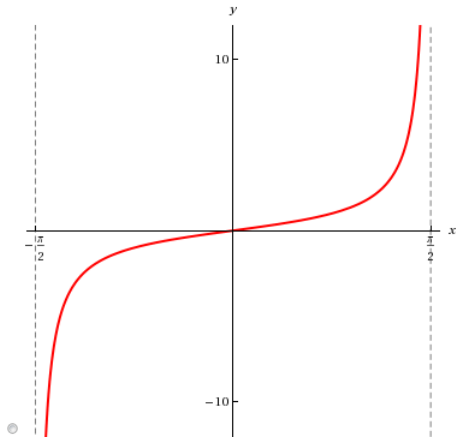


The trigonometric function $y = \tan x$ has period

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)

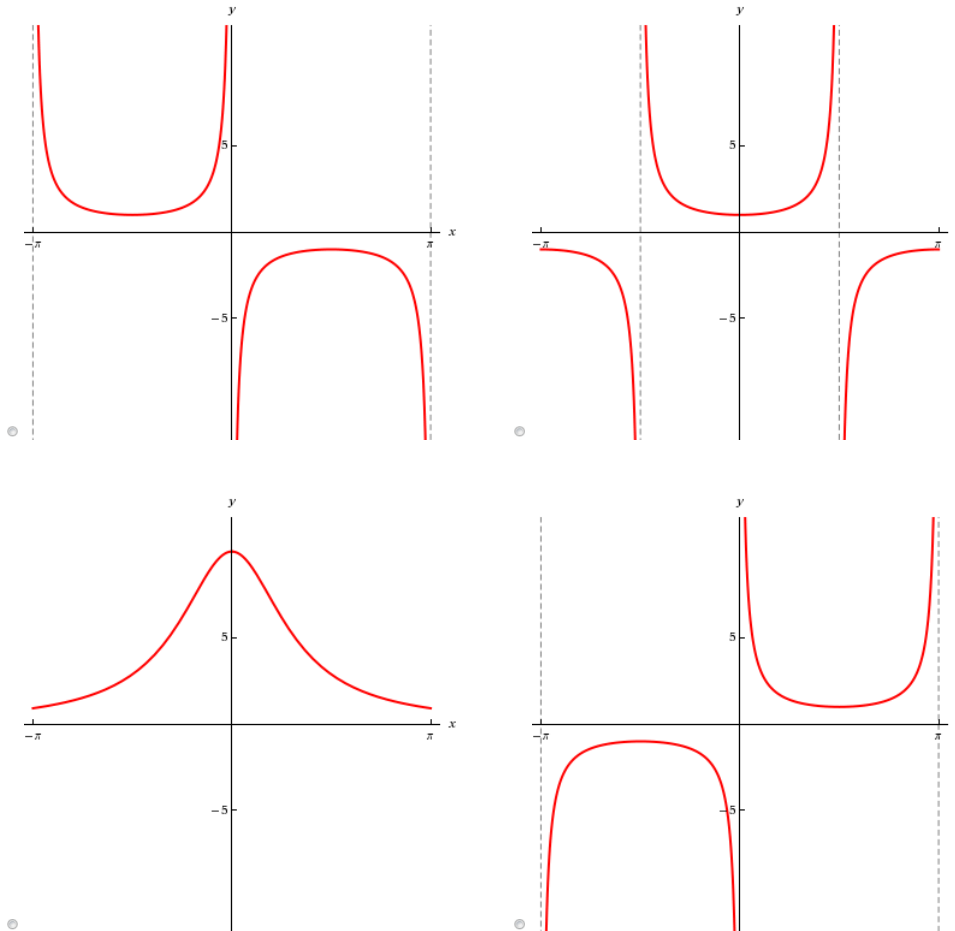
Sketch a graph of this function on the interval $(-\pi/2, \pi/2)$.



The trigonometric function $y = \csc x$ has period _____ 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 $(-\pi, \pi)$.



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

18°

rad

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

$\frac{\pi}{6}$

°

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.)

$$225^\circ$$

◦

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.)

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

rad

Solve the right triangle.

$$47^\circ$$

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

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

Find the other acute angle.

 ◦

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.)

$$\sin \theta = \text{[input]}$$

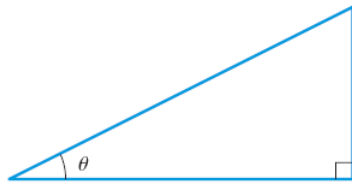
$$\cos \theta = \text{[input]}$$

$$\tan \theta = \text{[input]}$$

$$\csc \theta = \text{[input]}$$

$$\sec \theta = \text{[input]}$$

$$\cot \theta = \text{[input]}$$



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

$$\tan \theta < 0 \text{ and } \sin \theta > 0$$

- I
- II
- III
- IV

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

$\sin(\theta) =$
 $\cos(\theta) =$
 $\tan(\theta) =$
 $\csc(\theta) =$
 $\sec(\theta) =$
 $\cot(\theta) =$

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

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

$\sin \theta =$

$\tan \theta =$

$\csc \theta =$

$\sec \theta =$

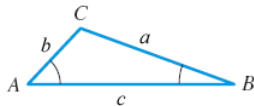
$\cot \theta =$

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

$$\frac{\text{---Select---}}{a} = \frac{\text{---Select---}}{b} = \frac{\text{---Select---}}{c}.$$

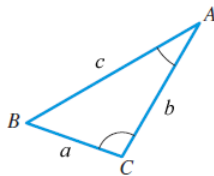
Solve the triangle using the Law of Sines. (Assume $c = 65$, $\angle A = 55^\circ$, and $\angle B = 25^\circ$. Round lengths to two decimal places.)

$a =$
 $b =$
 $\angle C =$ $^\circ$



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

$a =$
 $c =$
 $\angle B =$ $^\circ$



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

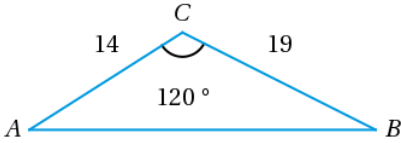
$$c^2 =$$

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

$$c = \boxed{}$$

$$\angle A = \boxed{}^\circ$$

$$\angle B = \boxed{}^\circ$$



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

$$\angle A = \boxed{}^\circ$$

$$\angle B = \boxed{}^\circ$$

$$\angle C = \boxed{}^\circ$$

