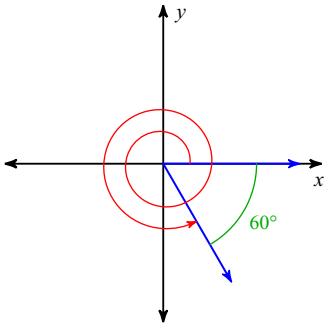
Precalculus Name_____ ID: 1

Unit 3 and 4 Exam Review

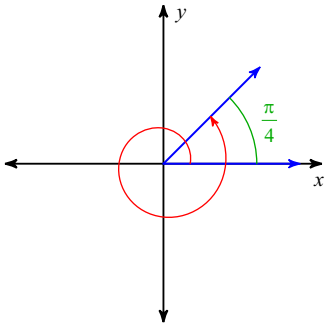
Date_____ Period____

Find the measure of each angle.

1)

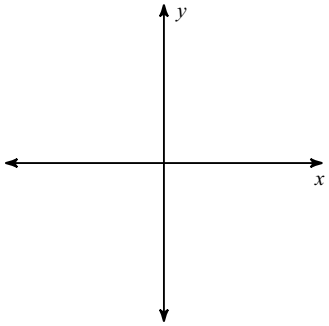


2)

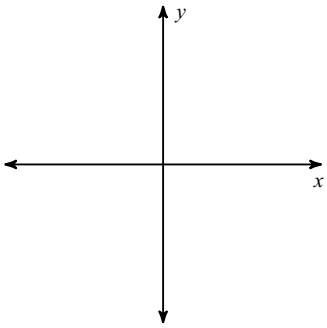


Draw an angle with the given measure in standard position.

3) $\frac{19\pi}{6}$



4) 520°



Find the reference angle.

5) 460°

6) $\frac{16\pi}{9}$

Convert each degree measure into radians.

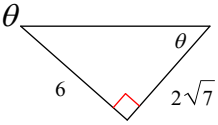
7) $255°$

Convert each radian measure into degrees.

8) $\frac{17\pi}{6}$

Find the value of the trig function indicated.

9) $\cos\theta$



In each triangle ABC, angle C is a right angle. Find the value of the trig function indicated.

10) Find $\cos A$ if $c = 22,\ b = 14$

Find the value of the trig function indicated.

11) Find $\tan\theta$ if $\sec\theta = \frac{\sqrt{10}}{3}$

Find the exact value of each trigonometric function.

12) $\tan -\frac{8\pi}{3}$

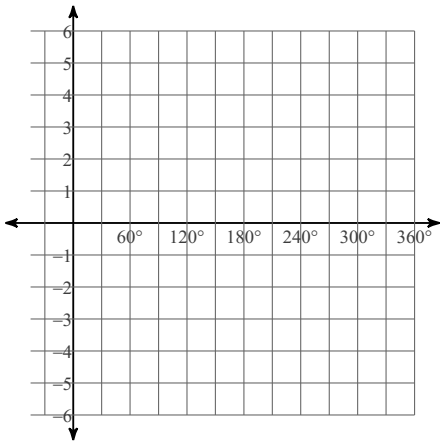
13) $\sin\frac{29\pi}{6}$

14) $\sec 315°$

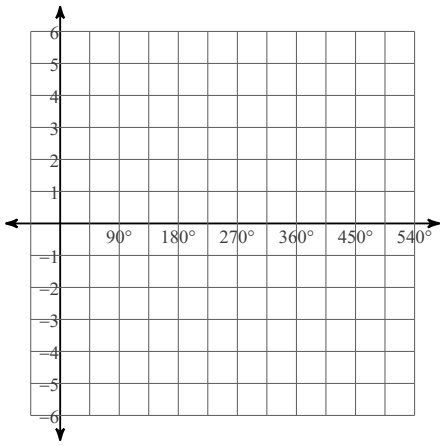
15) $\cos -\frac{14\pi}{3}$

Find the amplitude, the period in degrees, the phase shift in degrees, and the vertical shift. Then sketch the graph using degrees.

16) $y = 2\cos(4\theta - 30)$

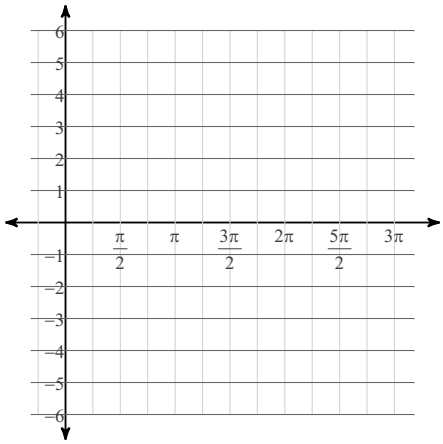


17) $y = 4\sin(\theta - 120)$

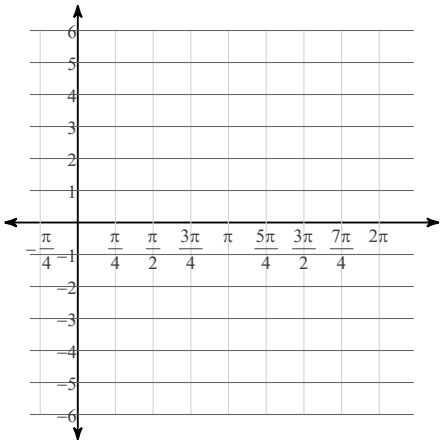


Find the amplitude, the period in radians, the phase shift in radians, and the vertical shift. Then sketch the graph using radians.

18) $y = 4\cos\left(\theta + \frac{3\pi}{2}\right)$



19) $y = 3\sin\left(2\theta - \frac{\pi}{2}\right)$



Find the exact value of each expression.

20) $\tan^{-1}\sqrt{3}$

21) $\tan^{-1} 0$

22) $\sin^{-1}\frac{1}{2}$

23) $\cos^{-1}\frac{\sqrt{2}}{2}$

24) $\cos^{-1}\left(\cot\frac{\pi}{4}\right)$

25) $\tan^{-1}\left(\csc\frac{\pi}{2}\right)$

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Unit 3 and 4 Exam Review

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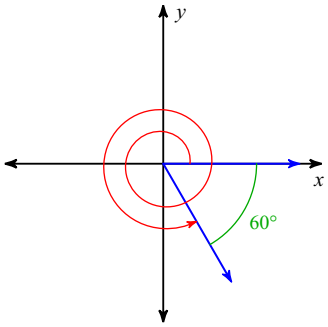
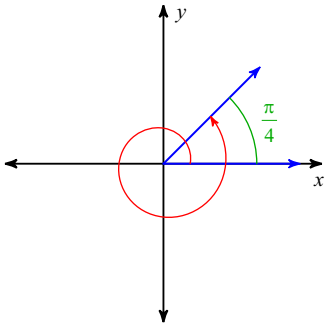
Find the measure of each angle.

1)



660°

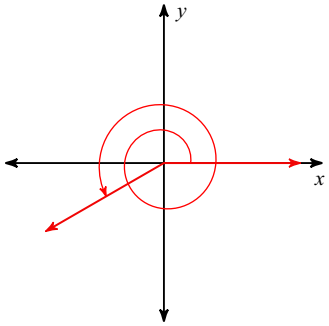
2)



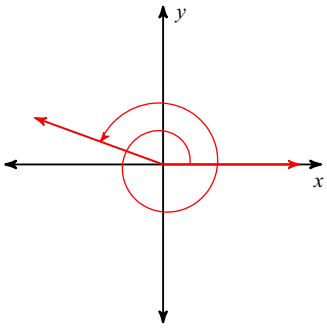
$\frac{9\pi}{4}$

Draw an angle with the given measure in standard position.

3) $\frac{19\pi}{6}$



4) 520°



Find the reference angle.

5) 460°

80°

6) $\frac{16\pi}{9}$

$\frac{2\pi}{9}$

Convert each degree measure into radians.

7) $255°$

$\frac{17\pi}{12}$

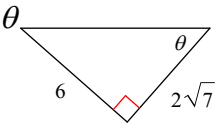
Convert each radian measure into degrees.

8) $\frac{17\pi}{6}$

$510°$

Find the value of the trig function indicated.

9) $\cos\theta$



$\frac{\sqrt{7}}{4}$

In each triangle ABC, angle C is a right angle. Find the value of the trig function indicated.

10) Find $\cos A$ if $c = 22,\ b = 14$

$\frac{7}{11}$

Find the value of the trig function indicated.

11) Find $\tan\theta$ if $\sec\theta = \frac{\sqrt{10}}{3}$

$\frac{1}{3}$

Find the exact value of each trigonometric function.

12) $\tan -\frac{8\pi}{3}$

$\sqrt{3}$

13) $\sin\frac{29\pi}{6}$

$\frac{1}{2}$

14) $\sec 315°$

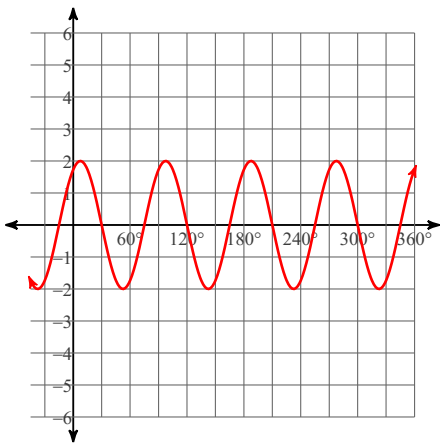
$\sqrt{2}$

15) $\cos -\frac{14\pi}{3}$

$-\frac{1}{2}$

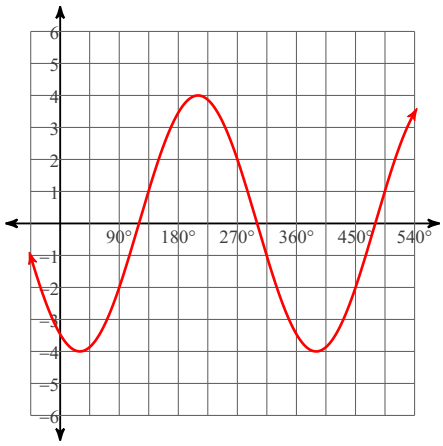
Find the amplitude, the period in degrees, the phase shift in degrees, and the vertical shift. Then sketch the graph using degrees.

16) $y = 2\cos(4\theta - 30)$



Amplitude: 2
Period: 90°
Phase shift: Right 7.5°
Vert. shift: None

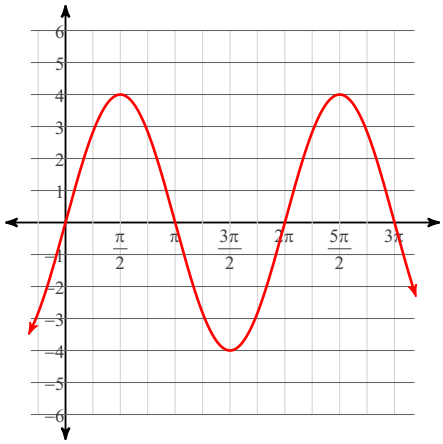
17) $y = 4\sin(\theta - 120)$



Amplitude: 4
Period: 360°
Phase shift: Right 120°
Vert. shift: None

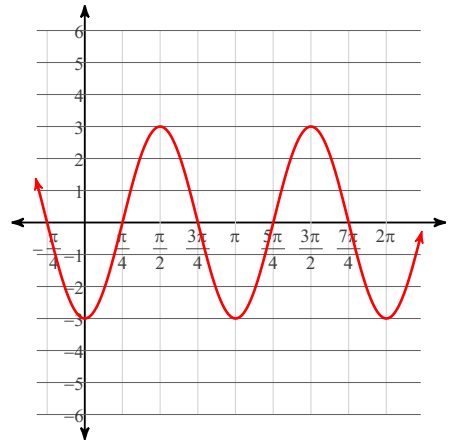
Find the amplitude, the period in radians, the phase shift in radians, and the vertical shift. Then sketch the graph using radians.

18) $y = 4\cos\left(\theta + \frac{3\pi}{2}\right)$



Amplitude: 4
Period: 2π
Phase shift: Left $\frac{3\pi}{2}$
Vert. shift: None

19) $y = 3\sin\left(2\theta - \frac{\pi}{2}\right)$



Amplitude: 3
Period: π
Phase shift: Right $\frac{\pi}{4}$
Vert. shift: None

Find the exact value of each expression.

20) $\tan^{-1}\sqrt{3}$

$\frac{\pi}{3}$

21) $\tan^{-1} 0$

0

22) $\sin^{-1}\frac{1}{2}$

$\frac{\pi}{6}$

23) $\cos^{-1}\frac{\sqrt{2}}{2}$

$\frac{\pi}{4}$

24) $\cos^{-1}\left(\cot\frac{\pi}{4}\right)$

0

25) $\tan^{-1}\left(\csc\frac{\pi}{2}\right)$

$\frac{\pi}{4}$