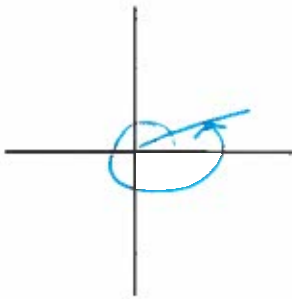


Advanced Algebra
6.4-6.6 Review

Name: Key
Hour: _____

Draw the angle with the given radian measure in standard position.

1. 7 radians



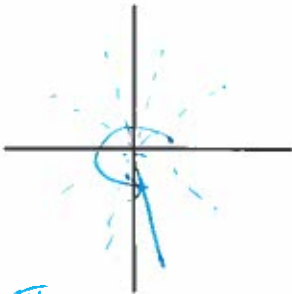
2. -2.5 radians



3 and 4. Complete the following for questions

- Draw the angle with the given measure in standard position.
- Find the reference angle.
- Give a positive and negative coterminal angle for each.

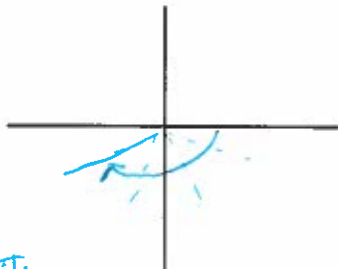
3. $\frac{8\pi}{5}$



b. $\frac{2\pi}{5}$

c. $\frac{18\pi}{5}, -\frac{2\pi}{5}$

4. $-\frac{5\pi}{6}$



b. $\frac{\pi}{6}$

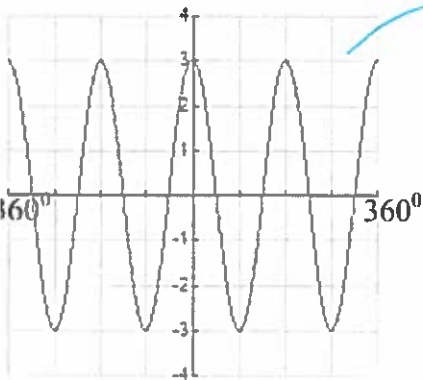
c. $\frac{7\pi}{6}, -\frac{17\pi}{6}$

Match the function with its graph.

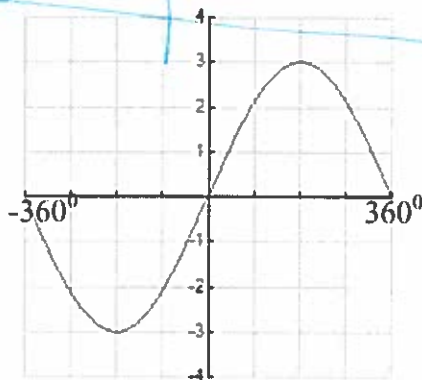
5. $y = 3\sin 2x$

6. $y = 3\sin \frac{1}{2}x$

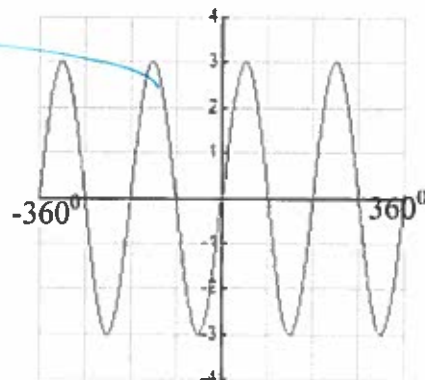
7. $y = 3\cos 2x$



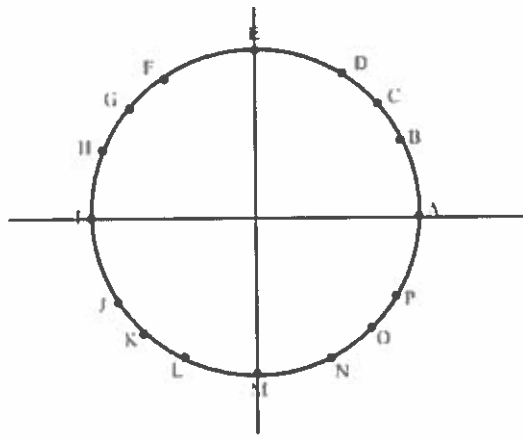
#7



#6



#5



8. Find the degree measure of angle L: 240°

9. Find the radian measure of angle P: 11π/6

10. Find the exact values

a. $\cos 120 = \underline{-1/2}$

b. $\sin \frac{2\pi}{3} = \underline{\sqrt{3}/2}$

c. $\tan(-135) = \underline{1}$

d. $\cos 5\pi = \underline{-1}$

e. $\tan \frac{17\pi}{6} = \underline{-\sqrt{3}/3}$

f. $\sin(-270) = \underline{1}$

11. Find the exact value, in degrees ($0 \leq \theta \leq 360$), of $\sin^{-1}\left(-\frac{1}{2}\right) = \underline{210^\circ}$ and 330°.

12. Find the exact value, in radians ($0 \leq \theta \leq 2\pi$), of $\tan^{-1}(\sqrt{3}) = \underline{\pi/3}$ and 4π/3.

13-18. Use (= or < or >) to make a true statement

13. $\sin 120 \underline{=} \cos 330$

14. $\tan 80 \underline{>} \tan 290$

15. $\sin\left(-\frac{2\pi}{3}\right) \underline{<} \sin\left(\frac{2\pi}{3}\right)$

16. $\cos\left(-\frac{2\pi}{3}\right) \underline{=} \cos\left(\frac{2\pi}{3}\right)$

17. $\sin 70 \underline{>} \cos 275$

18. $\sin(\text{any angle}) \underline{<} \tan 46$

Write an equation of the graph described. (#19-22)

19. The graph of $y = -2\sin 5x$ translated down 4 units and left 180° .

Equation: $y = -2\sin 5(x+180) - 4$

20. The graph of $y = \frac{1}{4}\cos 2x$ translated up 4 units and then reflected in the x-axis.

Equation: $y = -\frac{1}{4}\cos 2x + 4$

21. Write a function whose graph has the given characteristics.

parent: $y = \cos x$ phase shift: right 30° amplitude = 3
period: 720° vertical shift: up 5

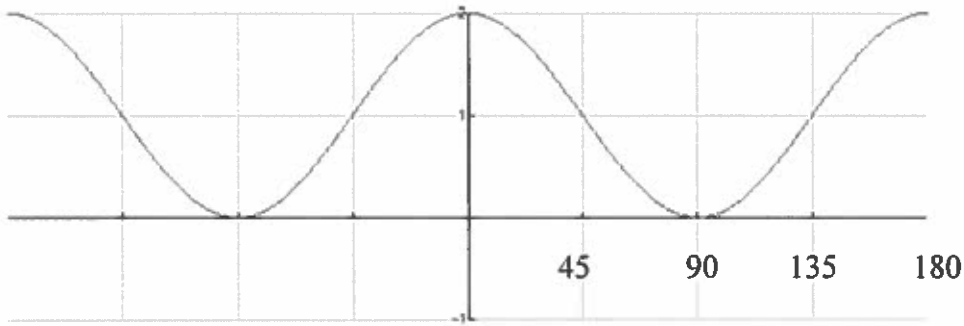
Equation: $y = 3\cos \frac{1}{2}(x - 30^\circ) + 5$

22. Write a function whose graph has the given characteristics.

parent: $y = \sin x$ phase shift: left 60° amplitude = 3
period: 90° vertical shift: down 3

Equation: $y = 3\sin 4(x+60^\circ) - 3$

23. Use the graph to answer the following.



Equation (write as a cosine function)

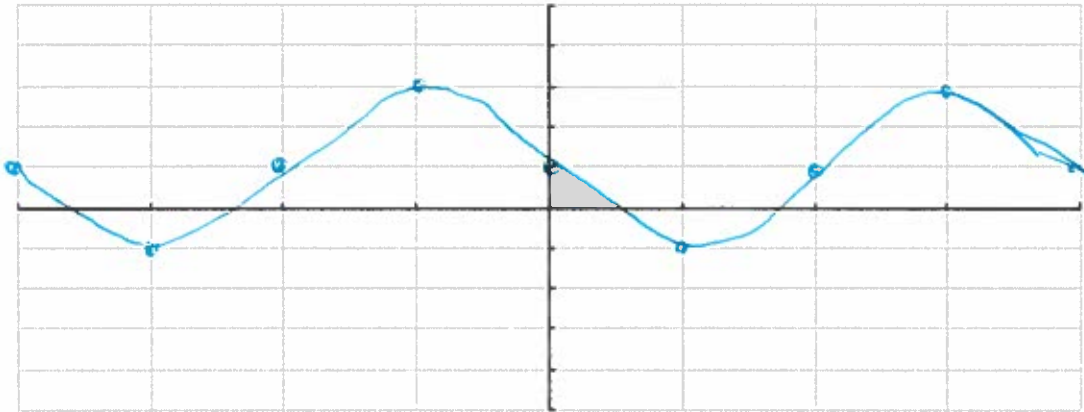
$y = \cos 2x + 1$

Equation (write as a sine function)

$y = \sin 2(x + 45^\circ) + 1$

24. Graph $y = 2\cos(x + 90^\circ) + 1$ from $-360 \leq \theta \leq 360$.

Period: 360° Amplitude: 2 Horizontal Shift: left 90° Vertical Shift: up 1



25. Graph $y = -3\sin\left(\frac{1}{2}(x - 180)\right) + 2$ from $-360 \leq \theta \leq 360$.

Period: 720° Amplitude: 3 Horizontal Shift: Right 180° Vertical Shift: up 2

