

QR - Trig Unit Review (FM Version)

8.1 Angles and Degrees

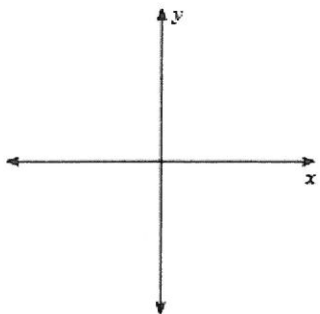
NAME: _____

Corrective Assignment

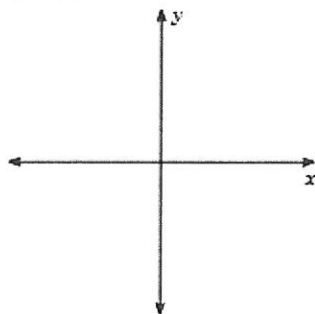
DATE: _____

Draw an angle with the given measure in standard position.

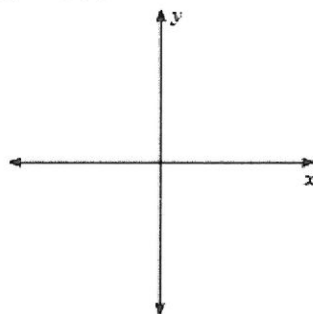
1. -190°



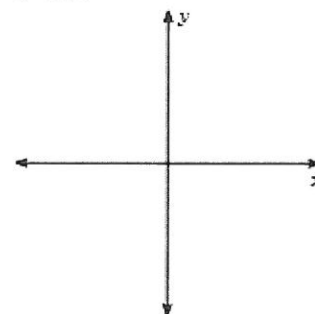
2. 460°



3. -280°

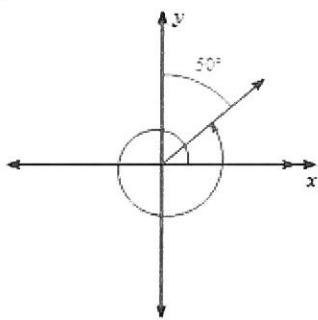


4. 250°

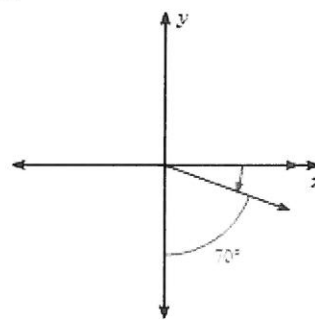


Find the measure of each angle.

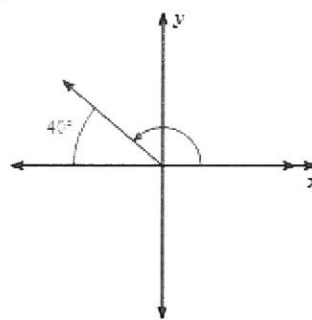
5.



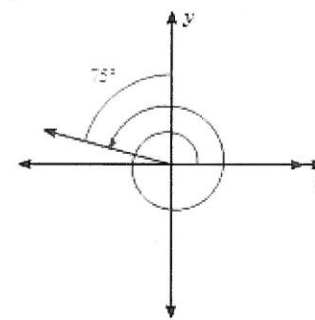
6.



7.



8.



State the quadrant in which the terminal side of each angle lies.

9. -633°

10. 684°

11. -102°

12. 305°

Find one positive and one negative coterminal angle the angle given.

13. 324°

14. -225°

15. 270°

16. -150°

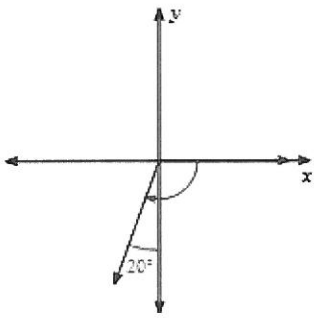
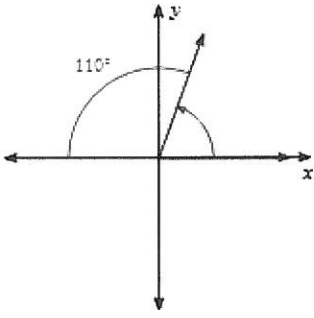
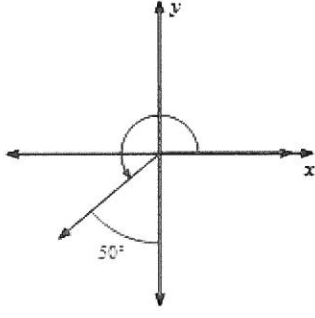
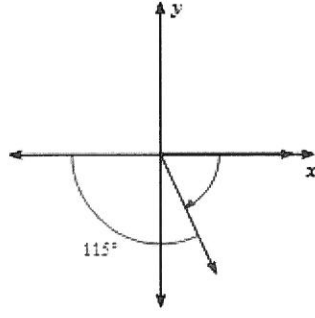
Find a coterminal angle between 0° and 360° .

17. -245°

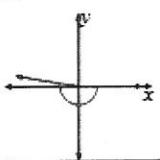
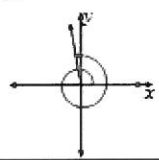
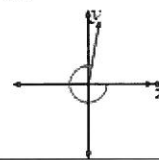
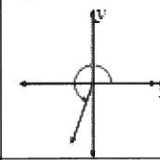
18. 755°

19. -600°

20. 555°

Find ALL coterminal angles.			
21. 	22. 	23. 	24. 
Convert to decimal degree.			
25. $48^{\circ}40'$	26. $-25^{\circ}25'45''$	27. $18^{\circ}10'5''$	28. $38^{\circ}16'30''$
Convert to degrees, minutes, and seconds.			
29. 78.25°	30. -142.5°	31. 168.54°	32. 26.725°

ANSWERS FOR 8.1 CORRECTIVE ASSIGNMENT

1. 	2. 	3. 	4. 	5. 400°	6. -20°	7. 140°	8. 525°
9. I	10. IV	11. III	12. IV	13. 684° -36°	14. 135° -585°	15. 630° -90°	16. 210° -510°
17. 115°	18. 35°	19. 120°	20. 195°	21. $-110^{\circ} + 360^{\circ}n$ where n is an integer		22. $70^{\circ} + 360^{\circ}n$ where n is an integer	
23. $220^{\circ} + 360^{\circ}n$ where n is an integer		24. $-65^{\circ} + 360^{\circ}n$ where n is an integer		25. $48.\bar{6}^{\circ}$		26. $-25.4291\bar{6}^{\circ}$	
27. $18.1680\bar{5}^{\circ}$		28. 38.275°		29. $78^{\circ}15'$		30. $-142^{\circ}30'$	
31. $168^{\circ}32'24''$		32. $26^{\circ}43'30''$					

8.2 Radians

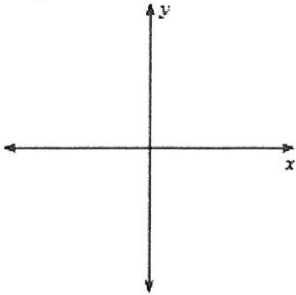
NAME: _____

Corrective Assignment

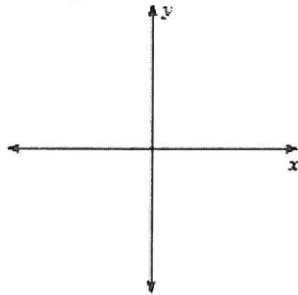
DATE: _____

Draw an angle with the given measure in standard position.

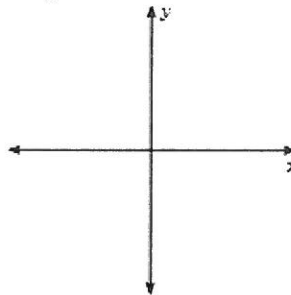
1. $\frac{4\pi}{3}$



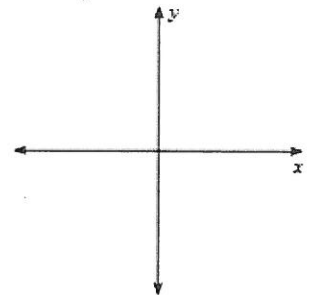
2. $-\frac{7\pi}{9}$



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

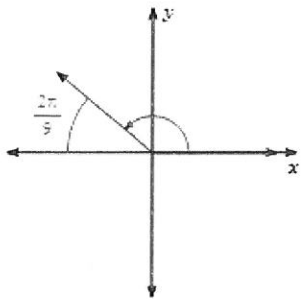


4. $-\frac{2\pi}{3}$

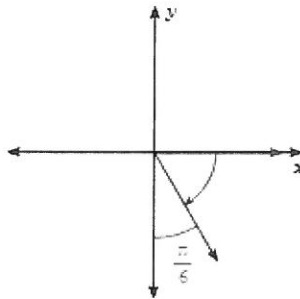


Find the measure of each angle.

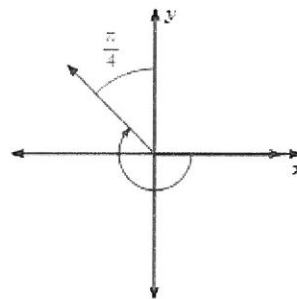
5.



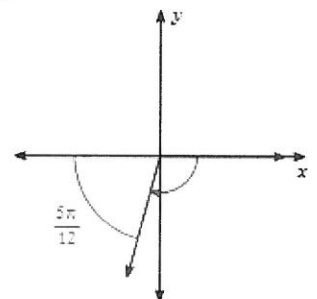
6.



7.



8.



State the quadrant in which the terminal side of each angle lies.

9. $\frac{2\pi}{3}$

10. $-\frac{15\pi}{4}$

11. $\frac{4\pi}{3}$

12. $-\frac{17\pi}{9}$

Find one positive and one negative coterminal angle the angle given.

13. $-\frac{13\pi}{4}$

14. $\frac{7\pi}{12}$

15. $\frac{11\pi}{6}$

16. $-\frac{13\pi}{18}$

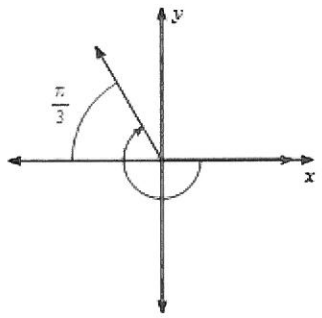
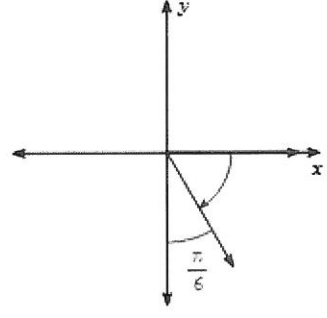
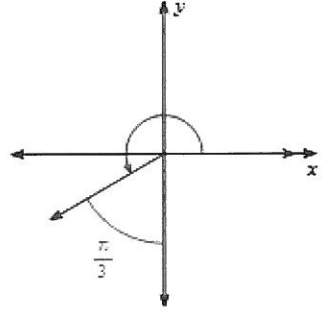
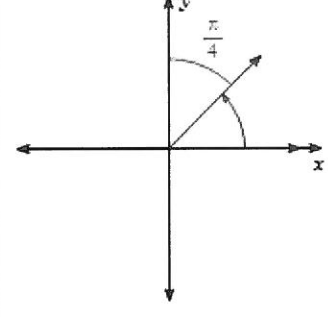
Find a coterminal angle between 0° and 360° .

17. $-\frac{19\pi}{15}$

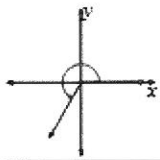
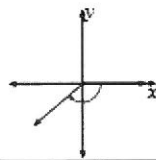
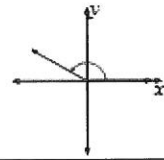
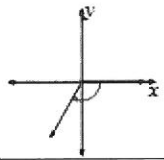
18. $\frac{53\pi}{12}$

19. $\frac{23\pi}{4}$

20. $-\frac{5\pi}{36}$

Find ALL coterminal angles.			
21. 	22. 	23. 	24. 
Convert to degrees.			
25. $-\frac{3\pi}{2}$	26. $\frac{43\pi}{18}$	27. $-\frac{7\pi}{3}$	28. $\frac{7\pi}{4}$
Convert to radians.			
29. 315°	30. 465°	31. -290°	32. 255°

ANSWERS FOR 8.2 CORRECTIVE ASSIGNMENT

1. 	2. 	3. 	4. 	5. $\frac{7\pi}{9}$	6. $-\frac{\pi}{3}$	7. $-\frac{5\pi}{4}$	8. $-\frac{7\pi}{12}$
9. II	10. I	11. III	12. I	13. $\frac{3\pi}{4}$ $-\frac{5\pi}{12}$	14. $\frac{31\pi}{12}$ $-\frac{17\pi}{12}$	15. $\frac{23\pi}{6}$ $-\frac{\pi}{6}$	16. $\frac{23\pi}{18}$ $-\frac{49\pi}{18}$
17. $\frac{11\pi}{15}$	18. $\frac{5\pi}{12}$	19. $\frac{7\pi}{4}$	20. $\frac{67\pi}{36}$	21. $-\frac{4\pi}{3} + 2\pi n$ where n is an integer		22. $-\frac{4\pi}{3} + 2\pi n$ where n is an integer	
23. $\frac{7\pi}{6} + 2\pi n$ where n is an integer		24. $\frac{\pi}{4} + 2\pi n$ where n is an integer		25. -270°		26. 430°	
27. -420°		28. 315°		29. $\frac{7\pi}{4}$		30. $\frac{31\pi}{4}$	
31. $-\frac{29\pi}{18}$		32. $\frac{17\pi}{12}$					

9.1 Reference Triangles and Reciprocal Trig Functions

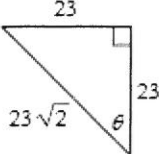
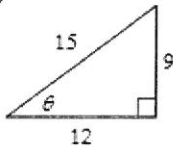
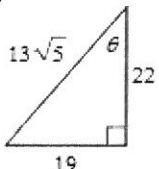
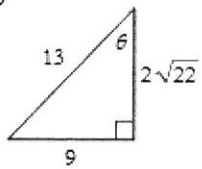
NAME: _____

Corrective Assignment

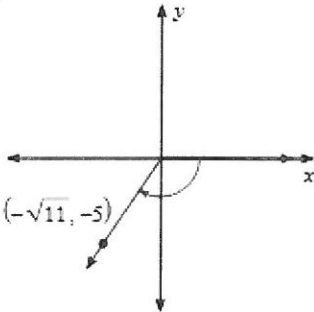
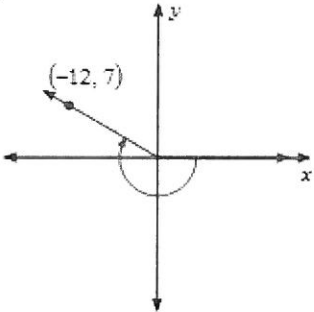
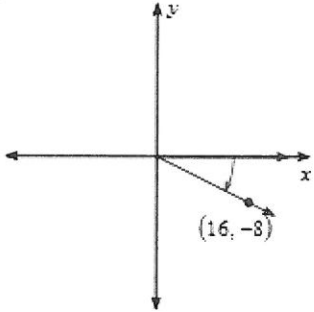
csc = reciprocal of sin
sec = rec. of cosine

DATE: _____

Find the RATIO of the trig function indicated. Do NOT find the actual measure of the angle!

<p>1. $\csc \theta$</p> 	<p>2. $\cot \theta$</p> 	<p>3. $\cos \theta$</p> 	<p>4. $\sec \theta$</p> 
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Use the given point on the terminal side of the angle θ to find the trigonometric function indicated.

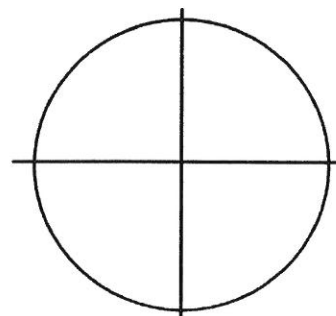
<p>5. $\cos \theta$</p> 	<p>6. $\tan \theta$</p> 	<p>7. $\cot \theta$</p> 
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Draw the reference triangle. Find the EXACT value of the trig ratio for θ .

<p>8. $\sin \theta$ for $(2, \sqrt{5})$</p>	<p>9. $\csc \theta$ for $(-4, 3)$</p>	<p>10. $\sec \theta$ for $(2\sqrt{3}, -2)$</p>
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Let θ be an angle in standard position. In which quadrant or quadrants can θ lie under the given conditions?

11. $\csc \theta$ is negative
12. $\sin \theta > 0$
13. $\cos \theta$ and $\sin \theta$ have the same sign
14. $\cos \theta$ is negative and $\tan \theta$ is positive



Draw the reference triangle. Find the EXACT value of the trig ratio for θ .

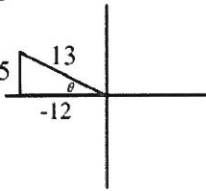
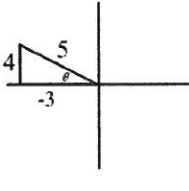
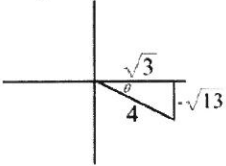
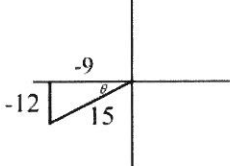
15. Given $\cot \theta = -\frac{12}{5}$ in quadrant II.
Find $\sin \theta$.

16. Given $\csc \theta = \frac{5}{4}$ where $\frac{\pi}{2} < \theta < \pi$.
Find $\tan \theta$.

17. Given $\cos \theta = \frac{\sqrt{3}}{4}$ where $\frac{3\pi}{2} < \theta < 2\pi$.
Find $\sin \theta$.

18. Given $\sec \theta = -\frac{15}{9}$ where $\pi < \theta < \frac{3\pi}{2}$.
Find $\tan \theta$.

ANSWERS TO 9.1 CORRECTIVE ASSIGNMENTS

1. $\sqrt{2}$	2. $\frac{4}{3}$	3. $\frac{22\sqrt{5}}{65}$	4. $\frac{13\sqrt{22}}{44}$
5. $-\frac{\sqrt{11}}{6}$	6. $-\frac{7}{12}$	7. -2	8. $\frac{\sqrt{5}}{3}$
9. $\frac{5}{3}$	10. $\frac{2\sqrt{3}}{3}$	11. III and IV	12. I and II
13. I and III	14. III	15. $\frac{5}{13}$ 	16. $-\frac{4}{3}$ 
17. $-\frac{\sqrt{13}}{4}$ 	18. $\frac{12}{9} = \frac{4}{3}$ 		

9.2 Reference and Special Angles

NAME: _____

Corrective Assignment

DATE: _____

Find the reference angle.

1. 321°	2. 288°	3. -137°	4. 125°
5. -214°	6. -308°	7. 248°	8. 172°

Find the exact value.

9. $\sin 30^\circ$	10. $\cos 60^\circ$	11. $\tan 135^\circ$	12. $\sin 150^\circ$
13. $\cos 225^\circ$	14. $\tan 150^\circ$	15. $\sin(-330)^\circ$	16. $\cos(-135)^\circ$
17. $\tan(-315)^\circ$	18. $\csc(-270)^\circ$	19. $\sec 180^\circ$	20. $\cot 90^\circ$

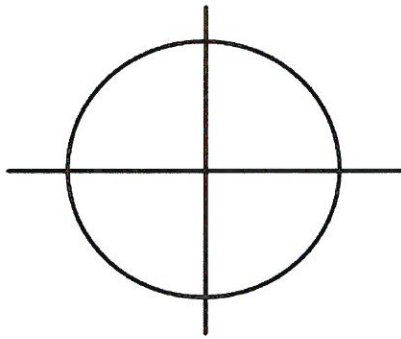
Find the exact value.

21. $\sin \frac{\pi}{4}$	22. $\cos \frac{\pi}{6}$	23. $\tan \frac{2\pi}{3}$	24. $\sin \frac{3\pi}{4}$
25. $\cos \pi$	26. $\tan \frac{7\pi}{4}$	27. $\sin(-\frac{5\pi}{3})$	28. $\cos(-\frac{11\pi}{6})$
29. $\tan(-\frac{3\pi}{4})$	30. $\csc \frac{\pi}{2}$	31. $\sec 2\pi$	32. $\cot \frac{3\pi}{4}$

If $0^\circ \leq \theta \leq 360^\circ$, then find θ

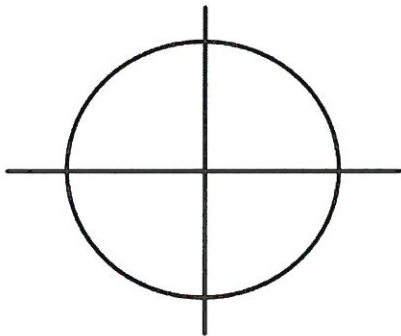
33. $\sin \theta = \frac{\sqrt{2}}{2}$	34. $\cos \theta = \frac{1}{2}$	35. $\tan \theta = \sqrt{3}$	36. $\sin \theta = \frac{\sqrt{3}}{2}$
37. $\sin \theta = 0$	38. $\cos \theta = -\frac{\sqrt{2}}{2}$	39. $\tan \theta = -1$	40. $\sin \theta = -\frac{1}{2}$
41. $\cos \theta = \frac{\sqrt{3}}{2}$	42. $\cot \theta = 1$	43. $\csc \theta = -1$	44. $\sec \theta = \text{undefined}$

45. Find all six trig functions. Fill in the table.



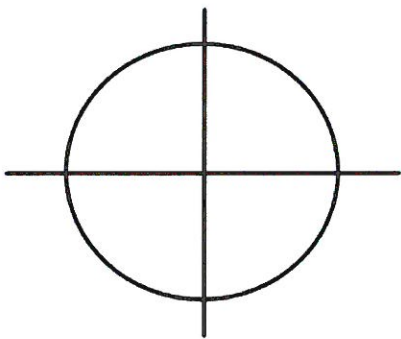
radians	$\sin \theta$	$\cos \theta$	$\tan \theta$	$\csc \theta$	$\sec \theta$	$\cot \theta$
$\frac{5\pi}{3}$						

46. Find all six trig functions. Fill in the table.



radians	$\sin \theta$	$\cos \theta$	$\tan \theta$	$\csc \theta$	$\sec \theta$	$\cot \theta$
$-\frac{\pi}{4}$						

47. Find all six trig functions. Fill in the table.



radians	$\sin \theta$	$\cos \theta$	$\tan \theta$	$\csc \theta$	$\sec \theta$	$\cot \theta$
$\frac{5\pi}{6}$						

ANSWERS TO CORRECTIVE ASSIGNMENT 9.2

1. 39°	2. 72°	3. 43°	4. 55°	5. 34°	6. 52°	7. 68°	8. 8°
9. $\frac{1}{2}$	10. $\frac{1}{2}$	11. -1	12. $\frac{1}{2}$	13. $-\frac{\sqrt{2}}{2}$	14. $\frac{\sqrt{3}}{3}$	15. $\frac{1}{2}$	16. $-\frac{\sqrt{2}}{2}$
17. 1	18. 1	19. -1	20. 0	21. $\frac{\sqrt{2}}{2}$	22. $\frac{\sqrt{3}}{2}$	23. $-\sqrt{3}$	24. $\frac{\sqrt{2}}{2}$
25. -1	26. -1	27. $-\frac{\sqrt{3}}{2}$	28. $\frac{\sqrt{3}}{2}$	29. 1	30. undefined	31. 1	32. -1
33. $45^\circ, 135^\circ$		34. $60^\circ, 300^\circ$		35. $60^\circ, 240^\circ$		36. $60^\circ, 120^\circ$	
37. $0^\circ/360^\circ, 180^\circ$		38. $135^\circ, 225^\circ$		39. $135^\circ, 315^\circ$		40. $210^\circ, 330^\circ$	
41. $30^\circ, 330^\circ$		42. $45^\circ, 225^\circ$		43. 270°		44. $90^\circ, 270^\circ$	

45.

sin	cos	tan	csc	sec	cot
$-\frac{\sqrt{3}}{2}$	$\frac{1}{2}$	$-\sqrt{3}$	$-\frac{2\sqrt{3}}{3}$	2	$-\frac{\sqrt{3}}{3}$

46.

sin	cos	tan	csc	sec	cot
$-\frac{\sqrt{2}}{2}$	$\frac{\sqrt{2}}{2}$	-1	$-\sqrt{2}$	$\sqrt{2}$	-1

47.

sin	cos	tan	csc	sec	cot
$\frac{1}{2}$	$-\frac{\sqrt{3}}{2}$	$-\frac{\sqrt{3}}{3}$	2	$-\frac{2\sqrt{3}}{3}$	$-\sqrt{3}$

Corrective Assignment

EXACT VALUE = TABLE

Use the table to find the EXACT value.			
1. $\csc 210^\circ$	2. $\sin \frac{3\pi}{4}$	3. $\cot\left(-\frac{5\pi}{6}\right)$	4. $\sec(-180^\circ)$
5. $\sin 330^\circ$	6. $\sin \frac{5\pi}{4}$	7. $\tan 1125^\circ$	8. $\cot -\frac{25\pi}{6}$
9. $\csc -120^\circ$	10. $\cos -1260^\circ$	11. $\sec -1050^\circ$	12. $\tan \frac{3\pi}{2}$
Use the table to find the angle where $0^\circ \leq \theta \leq 360^\circ$.			
13. $\cos \theta = -\frac{\sqrt{3}}{2}$	14. $\csc \theta = \sqrt{2}$	15. $\sec \theta = \text{undefined}$	16. $\sin \theta = \frac{\sqrt{2}}{2}$
17. $\csc \theta = -1$	18. $\csc \theta = \frac{2\sqrt{3}}{3}$	19. $\cos \theta = 0$	20. $\cot \theta = \sqrt{3}$
21. $\csc \theta = -2$	22. $\sec \theta = -\frac{2\sqrt{3}}{3}$	23. $\tan \theta = -\sqrt{3}$	24. $\cot \theta = \frac{\sqrt{3}}{3}$

APPROXIMATE VALUE = CALCULATOR**Round to the nearest hundredth!**

Use the calculator to find the APPROXIMATE value of each.			
25. $\csc 70^\circ$	26. $\cot -115^\circ$	27. $\sec 140^\circ$	28. $\sin 56^\circ$
29. $\sin \frac{5\pi}{18}$	30. $\tan -\frac{7\pi}{12}$	31. $\cot \frac{23\pi}{25}$	32. $\cot \frac{4\pi}{5}$
33. $\csc \frac{\pi}{11}$	34. $\sec -214^\circ$	35. $\csc \frac{5\pi}{7}$	36. $\sin 4^\circ$

Use the calculator to find each angle where $0^\circ \leq \theta \leq 360^\circ$. Round to the nearest hundredth.

37. $\cos \theta = -0.788$	38. $\sec \theta = 1.236$	39. $\tan \theta = 0.487732$
40. $\sec \theta = -1.13257$	41. $\cot \theta = -0.9004$	42. $\csc \theta = 1.28$
43. $\sin \theta = -0.35$	44. $\tan \theta = -1.81$	45. $\csc \theta = -1.92$

ANSWERS TO 9.3 CORRECTIVE ASSIGNMENT

1. -2	2. $\frac{\sqrt{2}}{2}$	3. $\sqrt{3}$	4. -1	5. $-\frac{1}{2}$
6. $-\frac{\sqrt{2}}{2}$	7. 1	8. $-\sqrt{3}$	9. $-\frac{2\sqrt{3}}{3}$	10. -1
11. $\frac{2\sqrt{3}}{3}$	12. undefined	13. $150^\circ, 210^\circ$	14. $45^\circ, 135^\circ$	15. $90^\circ, 270^\circ$
16. $45^\circ, 135^\circ$	17. 270°	18. $60^\circ, 120^\circ$	19. $90^\circ, 270^\circ$	20. $30^\circ, 210^\circ$
21. $210^\circ, 330^\circ$	22. $150^\circ, 210^\circ$	23. $120^\circ, 300^\circ$	24. $60^\circ, 240^\circ$	25. 1.06
26. 0.47	27. -1.31	28. 0.83	29. 1.06	30. 3.73
31. -3.89	32. -1.38	33. 3.55	34. -1.21	35. 1.28
36. 0.07	37. $142^\circ, 218^\circ$	38. $36^\circ, 324^\circ$	39. $26^\circ, 206^\circ$	40. $152^\circ, 208^\circ$
41. $132^\circ, 312^\circ$	42. $51.38^\circ, 128.62^\circ$	43. $200.49^\circ, 339.51^\circ$	44. $118.92^\circ, 298.92^\circ$	45. $211.39^\circ, 328.61^\circ$

10.1 Corrective Assignment – Graphing Sine and Cosine

Name: _____

Pre-Calculus

For 1-6, identify the given information and graph the trig function.

1) $y = 3 \cos x$
 Amp: _____ Period: _____

2) $y = -\cos 2x$
 Amp: _____ Period: _____

3) $y = 3 \cos \frac{1}{2}x$
 Amp: _____ Period: _____

4) $y = 1 - 3 \sin 4x$
 Amp: _____ Period: _____

5) $y = 1 + 2 \sin 2x$
 Amp: _____ Period: _____

6) $y = 2 \cos 3x - 1$
 Amp: _____ Period: _____

For 7-9, write the equation of the following sine curves.

7)

$y =$ _____

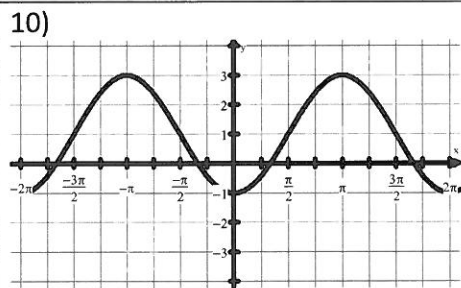
8)

$y =$ _____

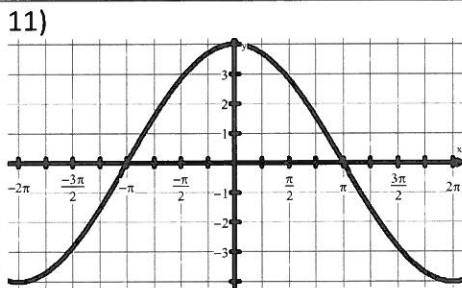
9)

$y =$ _____

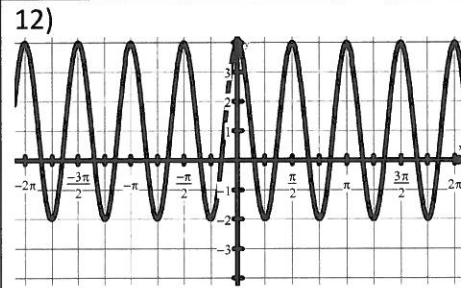
For 10-12, write the equation of the following *cosine* curves.



$y =$ _____



$y =$ _____



$y =$ _____

Answers to 10.1 Corrective Assignment

1) Amp: 3 Period: 2π	2) Amp: 1 Period: π	3) Amp: 3 Period: 4π
4) Amp: 3 Period: $\frac{\pi}{2}$	5) Amp: 2 Period: π	6) Amp: 2 Period: $\frac{2\pi}{3}$
7) $y = -\sin 4x$	8) $y = 3 \sin x - 1$	9) $y = 1 - 2 \sin 2x$
10) $y = -2 \cos x + 1$	11) $y = 4 \cos\left(\frac{1}{2}x\right)$	12) $y = 3 \cos 4x + 1$