

Corrective Assignment**ROUND ALL ANSWERS TO THE NEAREST HUNDRETH!**

Convert each degree measure into radians	
1. 225°	2. -280°
Convert each radian measure into degrees.	
3. $-\frac{23\pi}{6}$	4. $\frac{25\pi}{18}$
Convert to DMS (Degrees, Minutes, Seconds)	
5. 47.35°	6. -124.71°
Convert to decimal degree.	
7. $-42^\circ 15'$	8. $84^\circ 5' 28''$
Find a positive and a negative coterminal angle for each given angle. ANSWER IN DEGREES!	
9. 590°	10. -112°
Find a positive and a negative coterminal angle for each given angle. ANSWER IN RADIANS!	
11. $-\frac{23\pi}{6}$	12. $\frac{25\pi}{18}$

Find a coterminal angle between 0° and 360° .

13. 975°

14. -246°

Find a coterminal angle between 0π and 2π .

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

16. $\frac{97\pi}{36}$

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

17. -700°

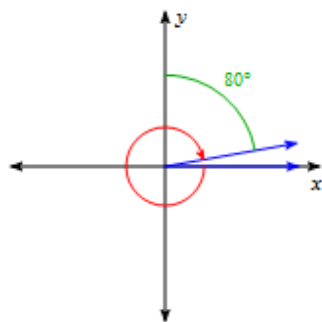
18. 220°

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

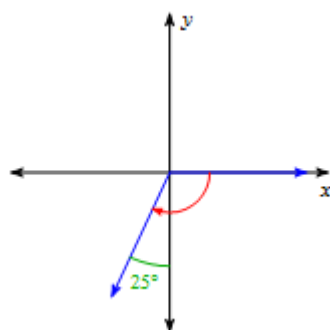
20. $-\frac{8\pi}{9}$

Name all coterminal angles.

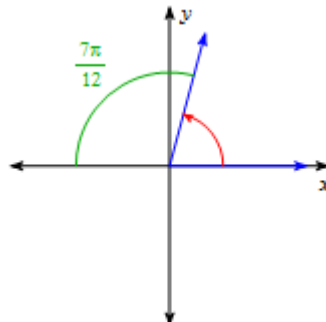
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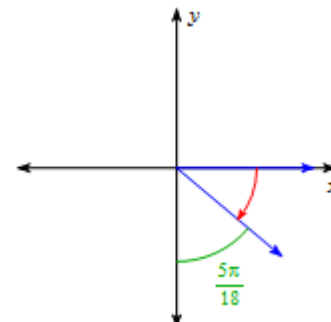
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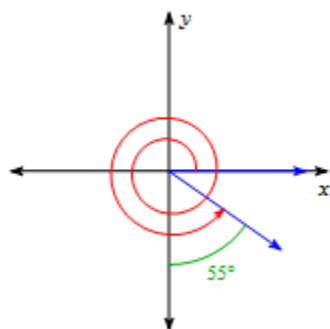


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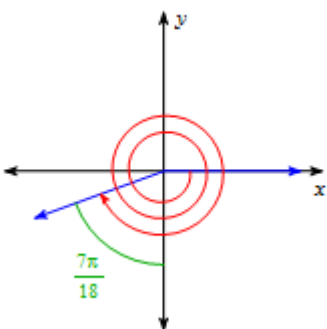


Find the measure of the angle.

25.

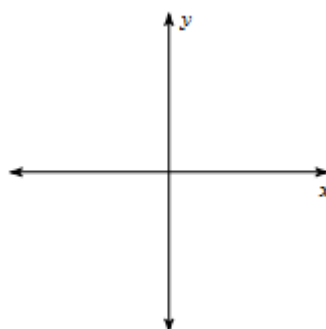


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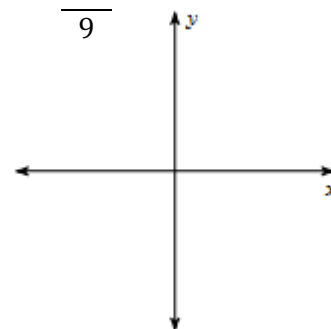


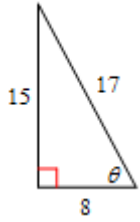
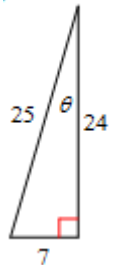
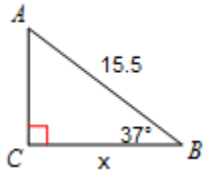
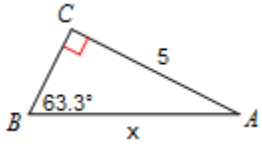
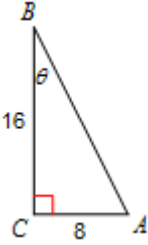
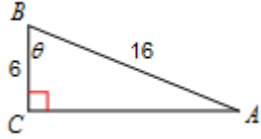
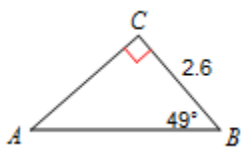
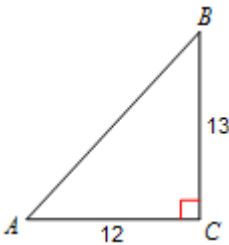
Draw the given angle.

27. -290°



28. $\frac{14\pi}{9}$



Use your calculator to evaluate.		Find the value of the trig function indicated.	
29. $\sin -146^\circ$	30. $\cos 866^\circ$	31. $\tan \theta$ 	32. $\sin \theta$ 
Find the measure of the indicated side.		Find the measure of the indicated angle.	
33. 	34. 	35. 	36. 
Solve each triangle completely.			
37. 		38. 	

FORMULAS:

$$s = \theta r$$

$$s = \frac{\theta}{360^\circ} 2\pi r$$

$$v = \frac{s}{t}$$

$$v = r\omega$$

$$\omega = \frac{\theta}{t}$$

39. The wheel of a machine rotates at the rate of 300 rpm. If the diameter of the wheel is 80 cm, what is the angular velocity (in radians per second) and linear velocity (in cm per second) of a point on the wheel?

40. Convert your linear velocity from above to miles per hour. (Use 1 inch = 2.54 cm)

41. From a point 115 feet from the base of a redwood tree, the angle of elevation to the top of the tree is 64.3° . Find the height of the tree.

42. A submarine traveling 9 mph is descending at an angle of depression of 5° . How many minutes does it take the submarine to reach a depth of 80 feet?

Skillz Review Simplify the following.

43. $\frac{\frac{1}{2}}{\frac{3}{2}}$

44. $\frac{\frac{1}{3}}{\frac{\sqrt{2}}{2}}$

45. $\frac{2}{\left(\frac{\sqrt{2}}{2}\right)}$

46. $\frac{\left(\frac{\sqrt{2}}{2}\right)}{\sqrt{2}}$

APPLICATION

47. A large gear of diameter 30 cm is revolving at 45 rpm. It drives a small gear of diameter 8 cm.

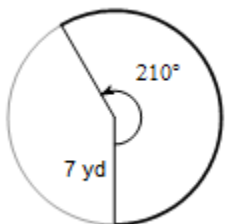
a. At how many radians per minute is the large gear turning?	b. What is the linear velocity of the teeth on the large gear?
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c. What is the linear velocity of the teeth on the small gear?	d. At how many radians per minute is the small gear turning?
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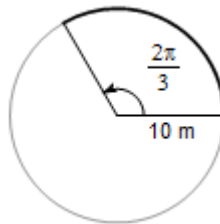
e. At how many revolutions per minute is the small gear turning?

48. Find the arc length of the following:

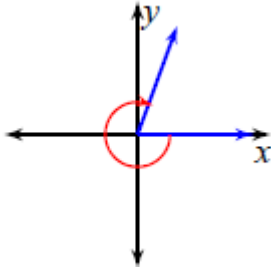
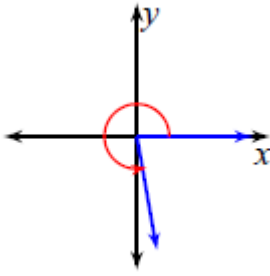
a.



b.



ANSWERS TO UNIT 8 CORRECTIVE ASSIGNMENT

1. $\frac{5\pi}{4}$	2. $-\frac{14\pi}{9}$	3. -690°	4. 250°
5. $47^\circ 21'$	6. $-124^\circ 42' 36''$	7. -42.25°	8. $84.09\bar{1}^\circ$
9. 230° and -130°	10. 248° and -472°	11. $\frac{\pi}{6}$ and $-\frac{11\pi}{6}$	12. $\frac{61\pi}{18}$ and $-\frac{11\pi}{18}$
13. 255°	14. 114°	15. $\frac{3\pi}{4}$	16. $\frac{25\pi}{36}$
17. I	18. III	19. I	20. III
21. $-350^\circ + 360n$ where n is an integer	22. $-115^\circ + 360n$ where n is an integer	23. $\frac{5\pi}{12} + 2\pi n$ where n is an integer	24. $-\frac{2\pi}{9} + 2\pi n$ where n is an integer
25. 685°	26. $-\frac{44\pi}{9}$	27. 	28. 
29. -0.56	30. -0.83	31. $\frac{15}{8}$	32. $\frac{7}{25}$
33. 12.38	34. 5.6	35. 26.6°	36. 68°
37. $m\angle A = 41^\circ$, $b = 3, c = 4$	38. $m\angle A = 47.3^\circ$, $m\angle B = 42.7^\circ, c = 17.7$	39. $w = 10\pi$ rad/sec $v = 400\pi$ cm/sec	40. 28.11 mph
41. 238.95 ft	42. 1.16 minutes	43. $\frac{1}{3}$	44. $\frac{\sqrt{2}}{3}$
45. $2\sqrt{2}$	46. $\frac{1}{2}$	47. a. 90π rad/min b. 1350π cm/min c. 1350π cm/min d. 337.5π rad/min e. 168.75 rpm	48. a. $\frac{49\pi}{6}$ yd b. $\frac{20\pi}{3}$ m