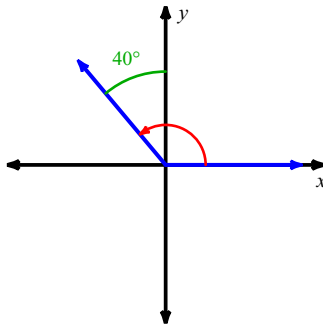


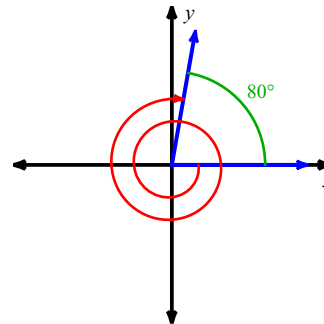
STUDY GUIDE -- TEST 1

Find the measure of each angle.

1)

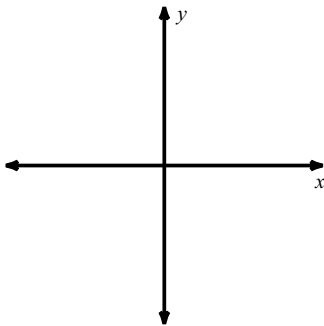


2)

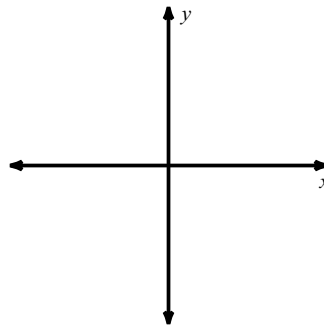


Draw an angle with the given measure in standard position.

3) -495°



4) 510°



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

5) -225°

6) 620°

Find a positive and a negative coterminal angle for each given angle.

7) 255°

8) -715°

Find a coterminal angle between 0° and 360° .

9) 692°

10) -346°

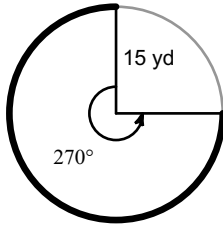
State if the given angles are coterminal.

11) $335^\circ, -695^\circ$

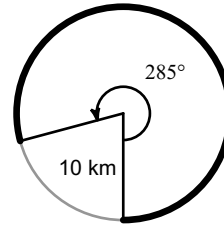
12) $200^\circ, -520^\circ$

Find the length of each arc.

13)



14)



Convert each degree measure into radians.

15) -600°

16) 785°

Convert each radian measure into degrees.

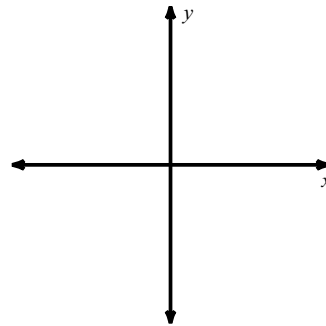
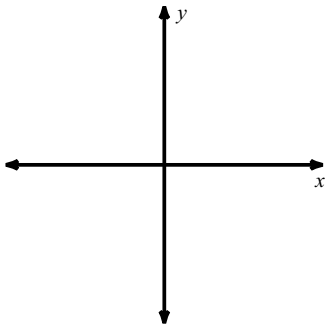
17) $\frac{23\pi}{18}$

18) $-\frac{3\pi}{4}$

Draw an angle with the given measure in standard position.

19) $\frac{31\pi}{9}$

20) $-\frac{19\pi}{6}$



Find a positive and a negative coterminal angle for each given angle.

21) $\frac{19\pi}{12}$

22) $-\frac{5\pi}{3}$

Find a coterminal angle between 0 and 2π for each given angle.

23) $-\frac{7\pi}{4}$

24) $\frac{23\pi}{6}$

25) Explain how you could find the measure of a central angle subtended by an arc that is 10 inches long in a circle with a radius of 8 inches.

26) Given that θ is an angle in standard position, O is the origin, and P is a point on the terminal side of θ . For each of the following draw a figure with a reference triangle. Then find the missing value, correct to three decimal places.

a) $P(8,y)$; $\theta = 55^\circ$; Find y .

b) $OP = 35$; $\theta = 42^\circ$; Find the coordinates of point P .

c) $P(3,5)$; Find θ .

27) An object rotates 140 revolutions in 20 minutes.

a) Determine the angular velocity of the object.

b) Determine the linear velocity of the object, in miles per hour, if the object's radius is 13 ft.

28) Given that θ is an angle in standard position with a measure of 350° ,

a. Find the measure of its reference angle.

b. Name angles in the first, second, and third quadrants that have the same reference angle as θ .

Convert each decimal degree measure into degrees-minutes-seconds.

29) -122.1775°

30) 141.0175°

Convert each degrees-minutes-seconds into decimal degrees.

31) $-101^\circ 23' 24''$

32) $87^\circ 13' 48''$