Secondary Math 2H   Name_____
9.1 Degrees and Radians   Date_____ Period____

Convert each degree measure into radians.

1) 255°   2) -225°

Convert each radian measure into degrees.

3) $-\dfrac{17\pi}{6}$ 4) $\dfrac{5\pi}{3}$

Convert each degree measure into radians and each radian measure into degrees.

5) -50°   6) $\dfrac{19\pi}{4}$

7) 390°   8) $-\dfrac{7\pi}{6}$

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

9) $\dfrac{5\pi}{4}$ 10) $\dfrac{5\pi}{9}$

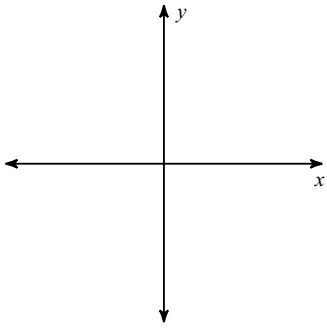11) $-\dfrac{\pi}{3}$ 12) −120°
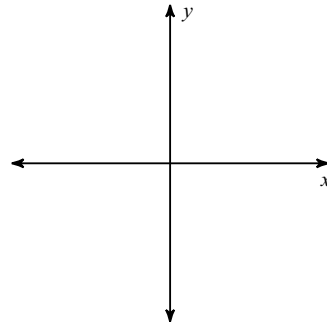
13) 260°   14) 560°

15) $-\dfrac{11\pi}{6}$ 16) $\dfrac{11\pi}{3}$

-1- Made with Infinite Algebra 2.

Draw an angle with the given measure in standard position and find the reference angle.

17) 185°

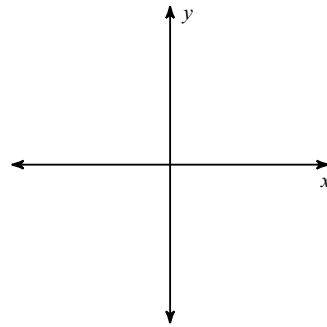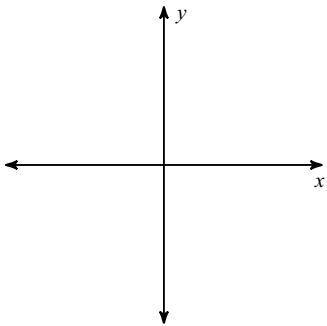18) $\dfrac{9\pi}{4}$

19) 525°

20) $-\dfrac{3\pi}{4}$
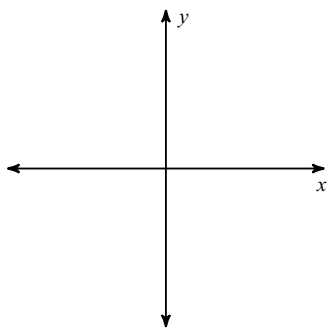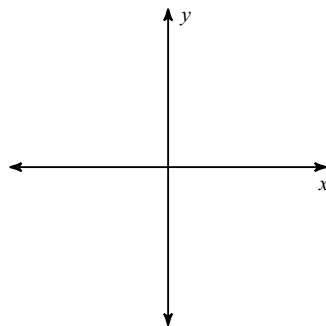
21) $-\dfrac{5\pi}{6}$

22) −400°
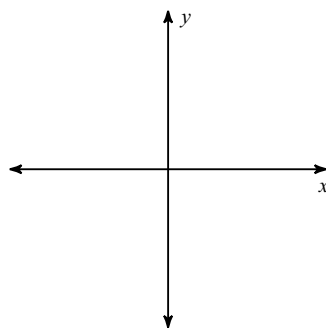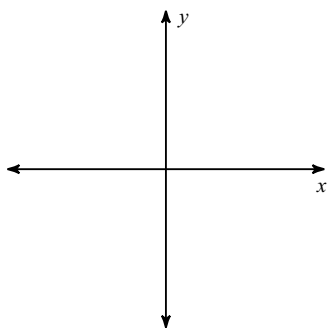
23) −570°

24) $\dfrac{10\pi}{9}$

25) $-\dfrac{31\pi}{12}$
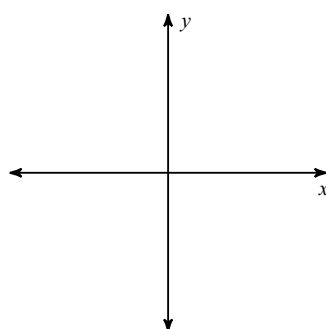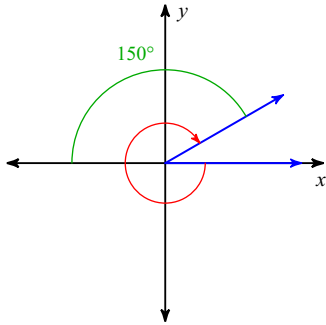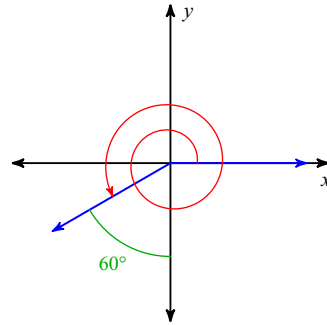
26) $\dfrac{10\pi}{3}$

27) 455°

28) $-\dfrac{37\pi}{18}$

Find the measure of each angle.

29)

150°

30)

60°

31)

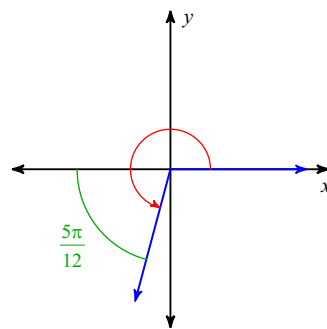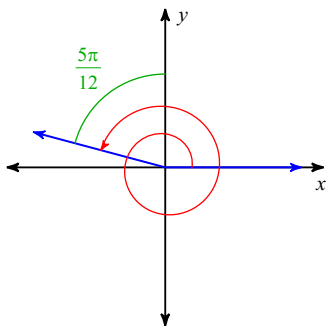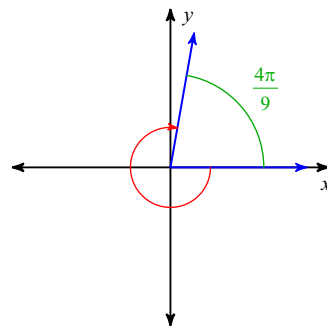$\frac{\pi}{6}$

32)

$\frac{5\pi}{12}$

33)

$\frac{5\pi}{12}$

34)

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

35)

20°

36)

$\frac{\pi}{4}$
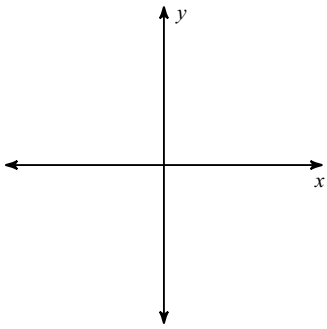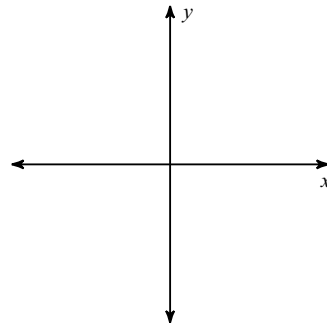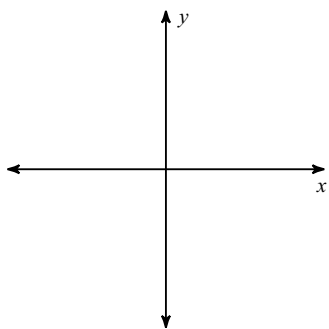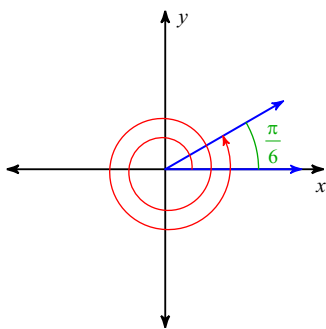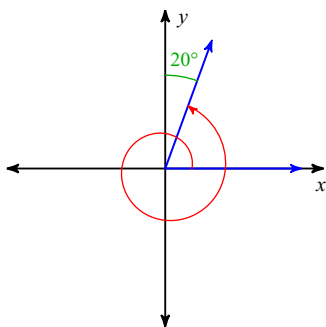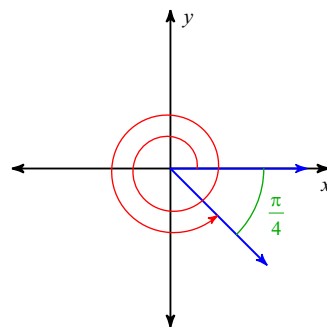
Find a positive and a negative coterminal angle for each given angle.

37) $332°$

38) $90°$

39) $\dfrac{31\pi}{18}$

40) $\dfrac{47\pi}{45}$

41) $-315°$

42) $-\dfrac{16\pi}{9}$

Find a coterminal angle between 0° and 360°.

43) $647°$

44) $-75°$

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

45) $-\dfrac{3\pi}{4}$

46) $\dfrac{71\pi}{12}$

Factor each completely.

47) $v^2 - 4v - 45$

48) $7x^2 + 53x - 90$

49) $15p^2 - 140p + 45$

50) $30x^2 - 12x$

 M a d e   w i t h   I n f i n i t e   A l g e b r a   2 .

Secondary Math 2H   Name_____
9.1 Degrees and Radians   Date_____ Period_____

Convert each degree measure into radians.

1) 255°

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

2) -225°

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

Convert each radian measure into degrees.

3) $-\dfrac{17\pi}{6}$

-510°

4) $\dfrac{5\pi}{3}$

300°

Convert each degree measure into radians and each radian measure into degrees.

5) -50°

$$-\frac{5\pi}{18}$$

6) $\dfrac{19\pi}{4}$

855°

7) 390°

$$\frac{13\pi}{6}$$

8) $-\dfrac{7\pi}{6}$

-210°

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

9) $\dfrac{5\pi}{4}$

III

10) $\dfrac{5\pi}{9}$

II

11) $-\dfrac{\pi}{3}$

IV

12) −120°
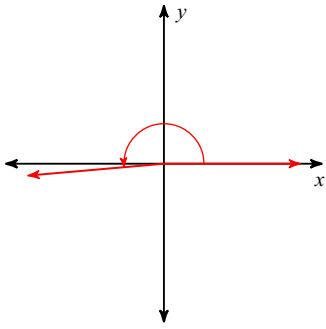
III

13) 260°

III

14) 560°
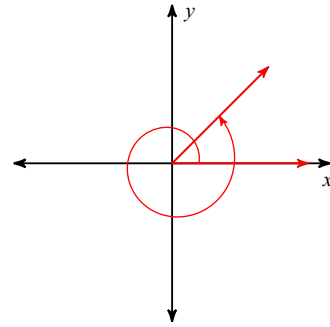
III

15) $-\dfrac{11\pi}{6}$

I

16) $\dfrac{11\pi}{3}$

IV

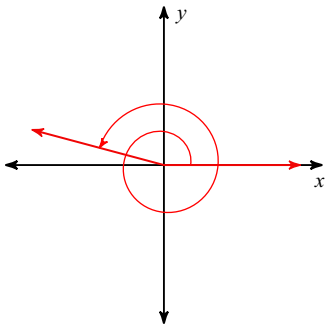**Draw an angle with the given measure in standard position and find the reference angle.**

17) 185°

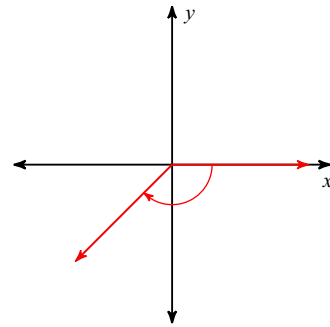

18) $\dfrac{9\pi}{4}$
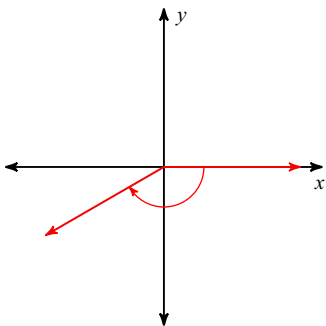

19) 525°

20) $-\dfrac{3\pi}{4}$
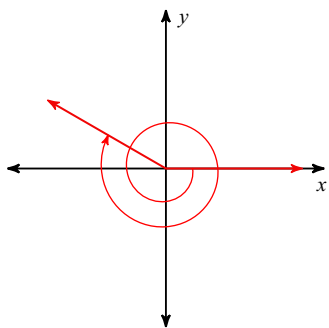

21) $-\dfrac{5\pi}{6}$
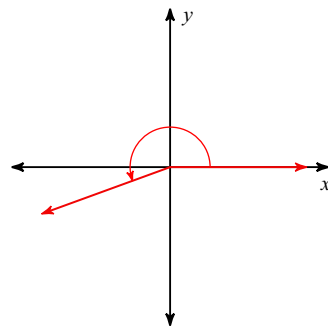

22) −400°
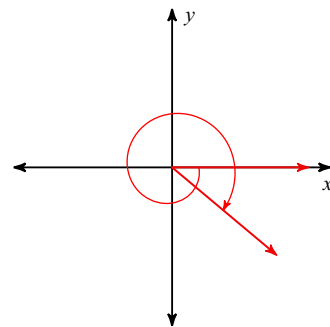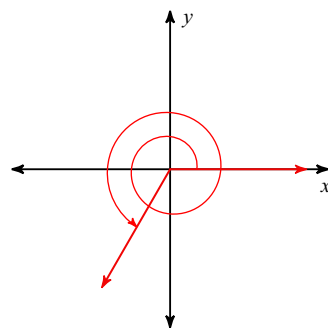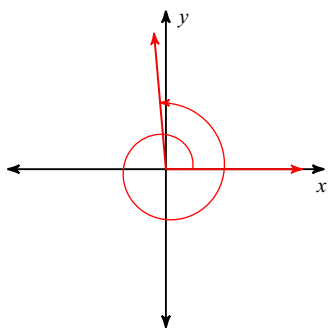
23) −570°
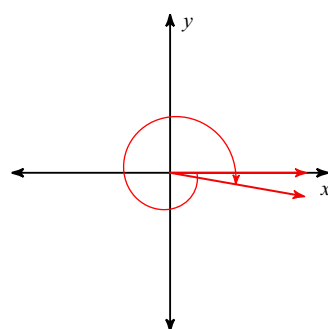
24) $\dfrac{10\pi}{9}$

25) $-\dfrac{31\pi}{12}$
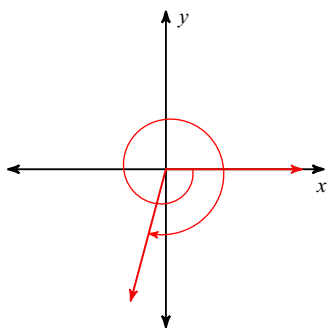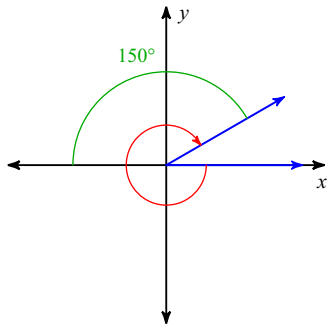
26) $\dfrac{10\pi}{3}$

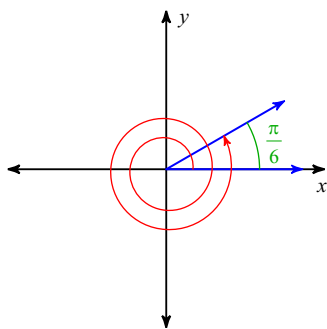27) 455°

28) $-\dfrac{37\pi}{18}$

Find the measure of each angle.

29)

$-330°$

30)
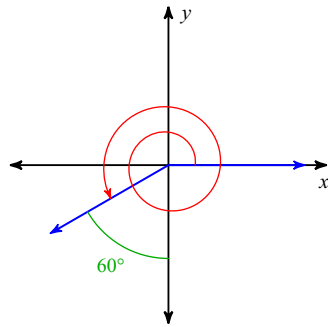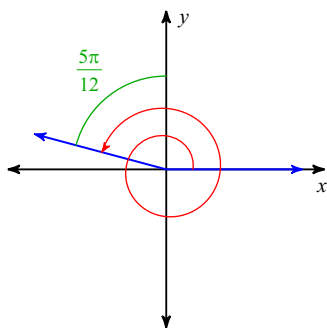

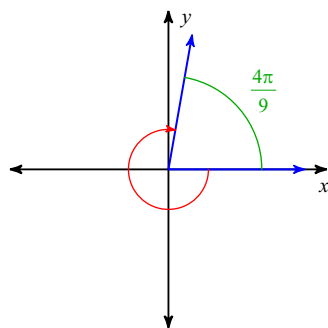
$570°$

31)

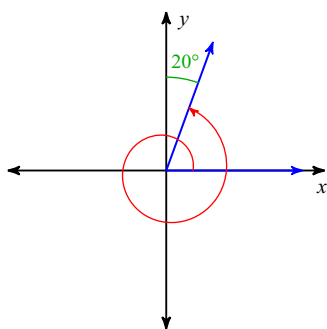$\dfrac{25\pi}{6}$
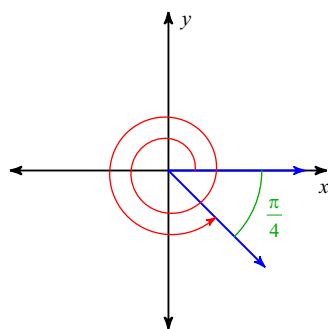
32)
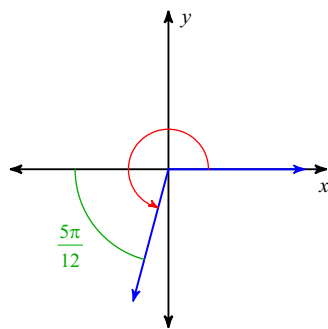
$\dfrac{17\pi}{12}$

33)

$\dfrac{35\pi}{12}$

34)

$-\dfrac{14\pi}{9}$

35)

$430°$

36)

$\dfrac{15\pi}{4}$

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

37) 332°

$692°$ and $-28°$

38) 90°

$450°$ and $-270°$

39) $\dfrac{31\pi}{18}$

$\dfrac{67\pi}{18}$ and $-\dfrac{5\pi}{18}$

40) $\dfrac{47\pi}{45}$

$\dfrac{137\pi}{45}$ and $-\dfrac{43\pi}{45}$

41) $-315°$

$45°$ and $-675°$

42) $-\dfrac{16\pi}{9}$

$\dfrac{2\pi}{9}$ and $-\dfrac{34\pi}{9}$

Find a coterminal angle between 0° and 360°.

43) 647°

$287°$

44) $-75°$

$285°$

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

45) $-\dfrac{3\pi}{4}$

$\dfrac{5\pi}{4}$

46) $\dfrac{71\pi}{12}$

$\dfrac{23\pi}{12}$

Factor each completely.

47) $v^2 - 4v - 45$

$(v - 9)(v + 5)$

48) $7x^2 + 53x - 90$

$(7x - 10)(x + 9)$

49) $15p^2 - 140p + 45$

$5(3p - 1)(p - 9)$

50) $30x^2 - 12x$

$6x(5x - 2)$