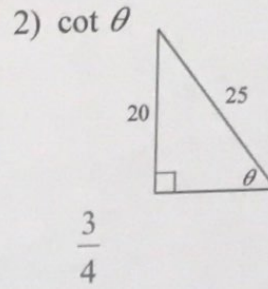
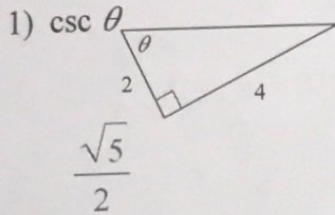


Find the value of the trig function indicated.



3) Find $\sec \theta$ if $\tan \theta = \frac{3}{4}$

$\frac{5}{4}$

4) Find $\tan \theta$ if $\csc \theta = \frac{5}{3}$

$\frac{3}{4}$

5) Find $\csc \theta$ if $\sec \theta = \frac{25}{24}$

$\frac{25}{7}$

6) Find $\tan \theta$ if $\cos \theta = \frac{24}{25}$

$\frac{7}{24}$

7) Find $\cot \theta$ if $\csc \theta = \frac{23\sqrt{22}}{44}$

$\frac{21\sqrt{22}}{44}$

8) Find $\sin \theta$ if $\sec \theta = \frac{15}{7}$

$\frac{4\sqrt{11}}{15}$

In each triangle ABC, angle C is a right angle. Find the value of the trig function indicated.

9) Find $\csc A$ if $a = 16$, $b = 12$

$\frac{5}{4}$

10) Find $\cot A$ if $b = 8$, $a = 6$

$\frac{4}{3}$

11) Find $\sin A$ if $b = 17$, $a = 4\sqrt{15}$

$\frac{4\sqrt{15}}{23}$

12) Find $\sec A$ if $b = 5$, $c = 15$

3

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

13) -320°

$-\frac{16\pi}{9}$

14) $\frac{4\pi}{3}$

240°

15) $\frac{17\pi}{9}$

340°

16) 580°

$\frac{29\pi}{9}$

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

17) -599°

121° and -239°

18) $\frac{5\pi}{4}$

$\frac{13\pi}{4}$ and $-\frac{3\pi}{4}$

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

$\frac{17\pi}{9}$ and $-\frac{19\pi}{9}$

20) 210°

570° and -150°

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

21) -130°

III

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

I

23) $-\frac{25\pi}{12}$

IV

24) -495°

III

25) $\frac{17\pi}{6}$

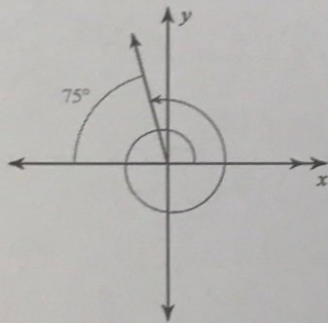
II

26) $\frac{7\pi}{3}$

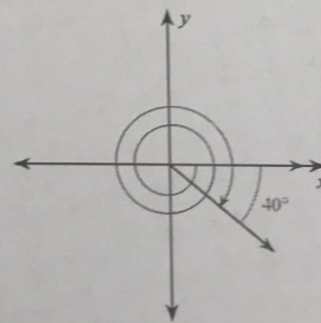
I

Find the measure of each angle.

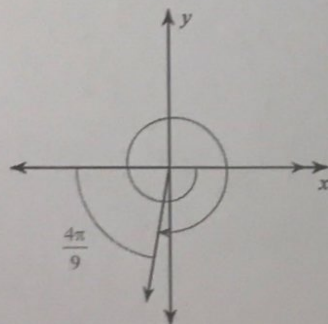
27) 465°



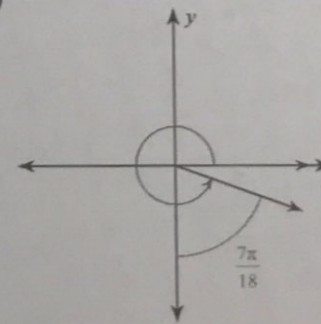
28) -760°



29)



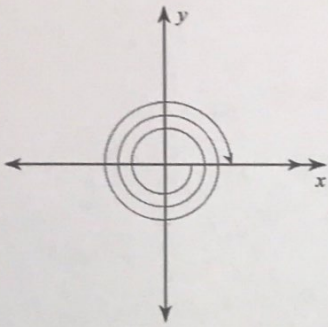
30)



$-\frac{23\pi}{9}$

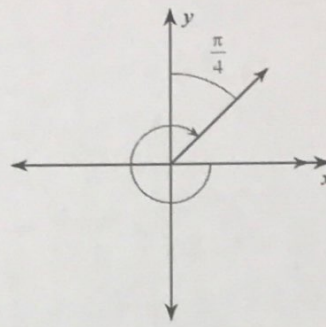
$\frac{17\pi}{9}$

31)



-6π

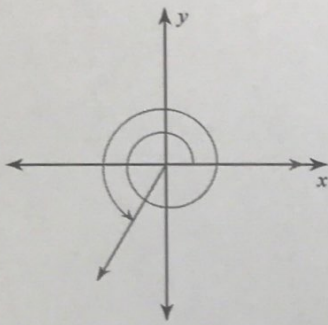
32)



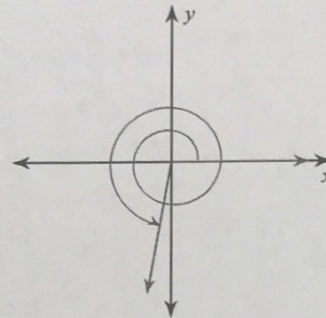
$-\frac{7\pi}{4}$

Draw an angle with the given measure in standard position.

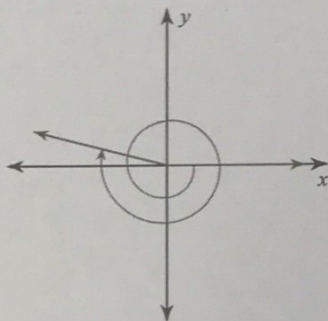
33) $\frac{10\pi}{3}$



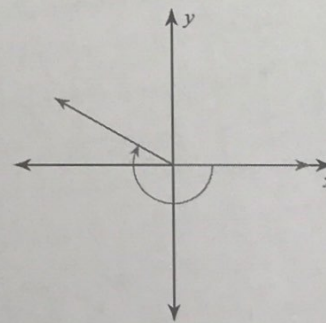
34) 620°



35) -555°



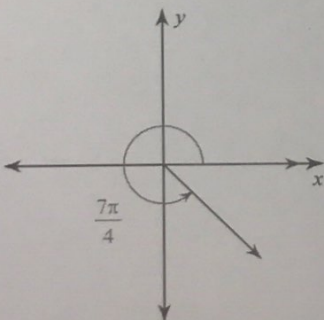
36) $-\frac{7\pi}{6}$



Find the reference angle.

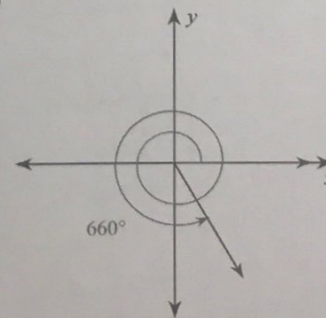
37)

$\frac{\pi}{4}$



38)

60°



39) -400°

40°

40) 530°

10°

41) $-\frac{9\pi}{4}$

$\frac{\pi}{4}$

42) 375°

15°

43) $\frac{35\pi}{9}$

$\frac{\pi}{9}$

44) $\frac{5\pi}{3}$

$\frac{\pi}{3}$

45) 325°

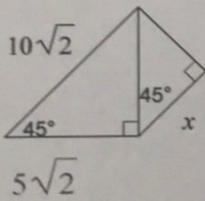
35°

46) $-\frac{29\pi}{9}$

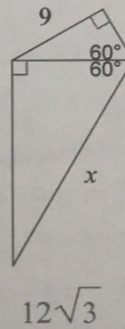
$\frac{2\pi}{9}$

Find the missing side lengths. Leave your answers as radicals in simplest form.

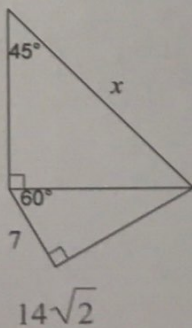
47)



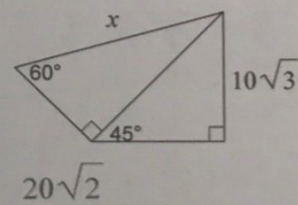
48)



49)

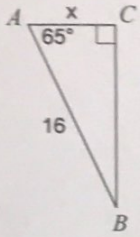


50)



Find the measure of each side indicated. Round to the nearest tenth.

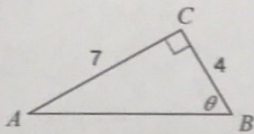
51)



6.8

Find the measure of each angle indicated. Round to the nearest tenth.

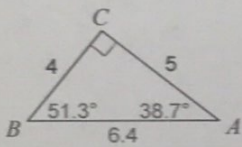
52)



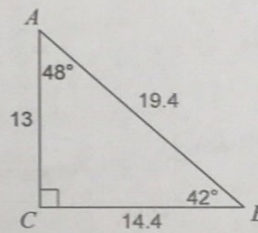
60.3°

Solve each triangle. Round answers to the nearest tenth.

53)



54)



55) The sides of a rectangle are 25 cm and 8 cm. What is the measure, to the nearest degree of the angle formed by the short side and the diagonal of the rectangle?

72°

56) You are a block away from a skyscraper that is 780 feet tall. Your friend is between the skyscraper and yourself. The angle of elevation from your position to the top of the skyscraper is 42 degrees. The angle of elevation from your friend's position to the top of the skyscraper is 71 degrees. To the nearest foot, how far are you from your friend?

598 ft

- 57) At 10:00 am, a person observes a hot air balloon climbing vertically in the air from a point 300 meters away from the launch pad for the balloon. The angle of elevations to the top of the balloon at this time is 25 degrees. At 10:02 am, the person observes that the angle of elevation to the balloon is now 51 degrees. What is the change in altitude for the balloon over the 2 minutes between the first and second observations?

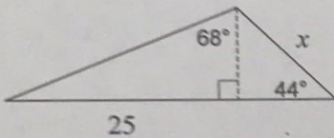
230.6 m

- 58) A balloon flying at 3000 feet above the ocean measures the angles of depression of each end of an island to be 75.8 degrees and 15.6 degrees. What is the length of the island to the nearest foot?

11,504 ft

Find the length of the side labeled x . Round intermediate values to the nearest tenth. Use the rounded values to calculate the next value. Round your final answer to the nearest tenth.

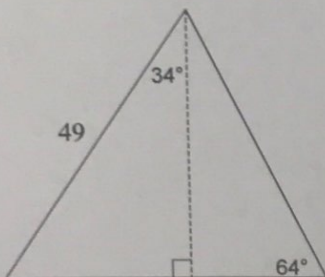
59)



14.5

Find the area of each triangle. Round intermediate values to the nearest tenth. Use the rounded values to calculate the next value. Round your final answer to the nearest tenth.

60)



958.2