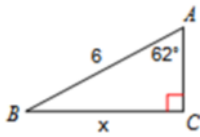


Find the measure of the indicated side or angle. Round to the nearest hundredth.

1.

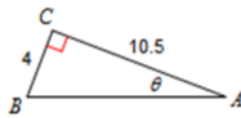


$$6 \cdot \sin(62^\circ) = \frac{x}{6} \cdot 6$$

$$6 \sin(62^\circ) = x$$

$$x = 5.29$$

2.

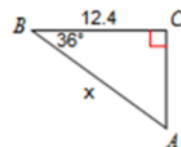


$$\tan(\theta) = \frac{4}{10.5}$$

$$\tan^{-1}\left(\frac{4}{10.5}\right) = \theta$$

$$\theta = 20.85^\circ$$

3.



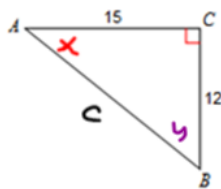
$$x \cdot \cos(36^\circ) = \frac{12.4}{x} \cdot x$$

$$\frac{x \cos(36^\circ)}{\cos(36^\circ)} = \frac{12.4}{\cos(36^\circ)}$$

$$x = 15.32$$

Solve each triangle. Round to the nearest hundredth.

4.



$$\tan(x) = \frac{12}{15}$$

$$\tan^{-1}\left(\frac{12}{15}\right) = x$$

$$x = 38.65^\circ$$

$$15^2 + 12^2 = c^2$$

$$225 + 144 = c^2$$

$$\sqrt{369} = \sqrt{c^2}$$

$$c = 19.2$$

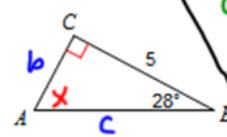
$$x + y + 90^\circ = 180^\circ$$

$$38.65^\circ + y + 90^\circ = 180^\circ$$

$$y + 128.65^\circ = 180^\circ$$

$$y = 51.35^\circ$$

5.



$$c \cdot \cos(28^\circ) = \frac{5}{c} \cdot c$$

$$\frac{c \cdot \cos(28^\circ)}{\cos(28^\circ)} = \frac{5}{\cos(28^\circ)}$$

$$c = 5.66$$

$$28^\circ + x = 90^\circ$$

$$x = 62^\circ$$

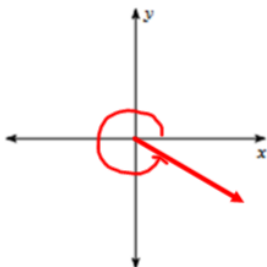
$$5 \cdot \tan(28^\circ) = \frac{b}{5} \cdot 5$$

$$5 \tan(28^\circ) = b$$

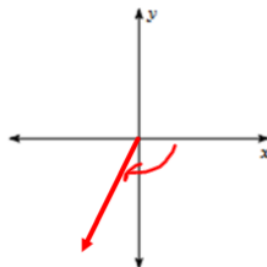
$$b = 2.65$$

Draw an angle with the given measure in standard position.

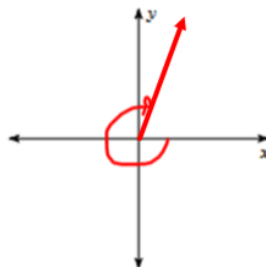
6.  $330^\circ$



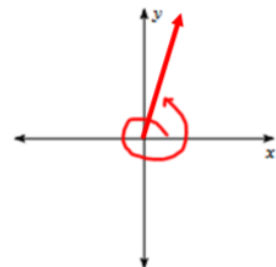
7.  $-115^\circ$



8.  $-290^\circ$

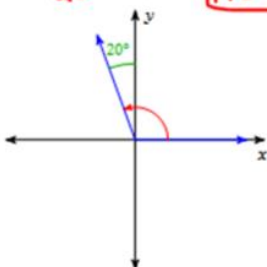


9.  $440^\circ$

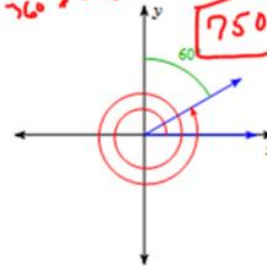


Find the measure of each angle.

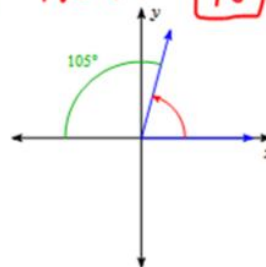
10.  $20^\circ + 90^\circ = 110^\circ$



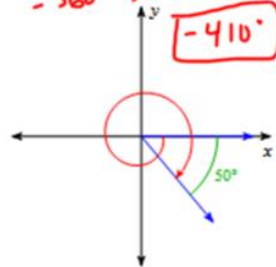
11.  $76^\circ + 360^\circ + 30^\circ = 750^\circ$




12.  $180^\circ - 105^\circ = 75^\circ$




13.  $-360^\circ - 50^\circ = -410^\circ$




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

14.  $-446^\circ$   
 $+360$   
 $-86$   
  
IV

15.  $870^\circ$   
 $-360$   
 $510^\circ$   
 $-360$   
 $150^\circ$   
  
II

16.  $-190^\circ$   
  
II


17.  $215^\circ$   
  
III

Find a coterminal angle between  $0^\circ$  and  $360^\circ$ .

18.  $-45^\circ$   
 $+360^\circ$   
315°

19.  $435^\circ$   
 $-360^\circ$   
75°

Find ALL coterminal angles.

20.  
  
 $175^\circ + 360^\circ n$   
 where  $n$  is an integer

21.  $-200^\circ$   
 $-200^\circ + 360^\circ n$   
 where  $n$  is an integer

22.  $90^\circ$   
 $90^\circ + 360^\circ n$   
 where  $n$  is an integer

Solve the following.

23.  $2x^2 - 3x = 9$   
 $2x^2 - 3x - 9 = 0$   
 $a = 2$   
 $b = -3$   
 $c = -9$   
 $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$   
 $\frac{-(-3) \pm \sqrt{(-3)^2 - 4(2)(-9)}}{2(2)}$   
 $\frac{3 \pm \sqrt{81}}{4} = \frac{3 \pm 9}{4} = \frac{12}{4} \text{ or } \frac{-6}{4}$   
x = 3 or -3/2

24.  $\frac{200}{10} = \frac{10(b)^{12}}{10}$   
 $20 = b^{12}$   
 $\sqrt[12]{20} = \sqrt[12]{6^{12}}$   
b = 1.28

25.  $\frac{200}{10} = \frac{10(2)^{2t}}{10}$   
 $20 = 2^{2t}$   
 $\ln 20 = \ln 2^{2t}$   
 $\frac{\ln 20}{\ln 2} = \frac{2t \ln 2}{\ln 2}$   
 $\frac{4.32}{2} = \frac{2t}{2}$   
t = 2.16