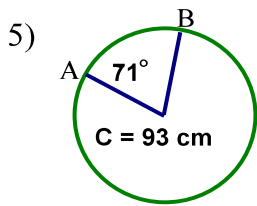


Algebra 2

Find the missing measures. Give circumference and area in terms of pi and to the nearest tenth.

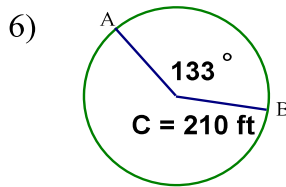
1) Circle radius = 18 in	2) Circle r = 22.5 mm	3) Circle r = 15.12 m	4) Circle r = 7.05 ft
diameter = 18 in (2) = 36 in	d = 45 mm	d = 30.24 m	d = 14.1 ft
Circum. = $36\pi$ in = 113.1 in	C = $45\pi$ mm = 141.4 mm	C = 95 m	C = $14.1\pi$ ft = 44.3 ft
Area = $324\pi$ in <sup>2</sup> = 1017.9 in <sup>2</sup>	A = $506.25\pi$ mm <sup>2</sup> = 1590 mm <sup>2</sup>	A = $228.6\pi$ m <sup>2</sup> = 718.17 m <sup>2</sup>	A = 156 ft <sup>2</sup>

Find the length of minor arc AB using a proportion.



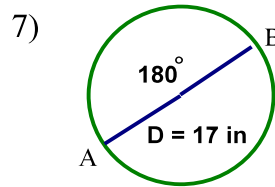
$$\frac{x}{93cm} = \frac{71^\circ}{360^\circ}$$

$$x = 18.34cm$$

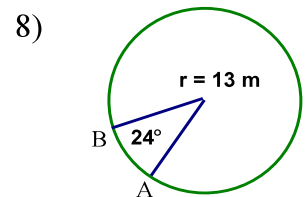


$$\frac{x}{210ft} = \frac{133^\circ}{360^\circ}$$

$$x = 77.58ft$$

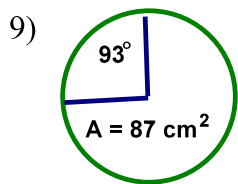


$$x = 26.7 \text{ in}$$



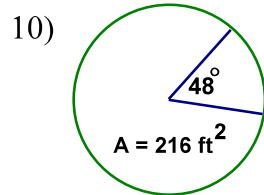
$$x = 5.45 \text{ m}$$

Find the area of the sector using a proportion.

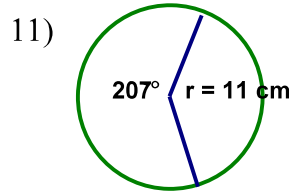


$$\frac{x}{87cm^2} = \frac{93^\circ}{360^\circ}$$

$$x = 22.48cm^2$$

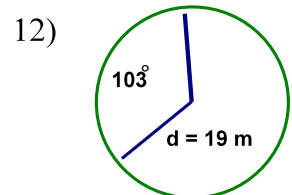


$$x = 28.8 \text{ ft}^2$$



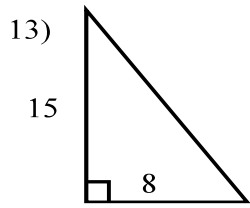
$$\frac{x}{121\pi cm^2} = \frac{207^\circ}{360^\circ}$$

$$x = 218.58cm^2$$

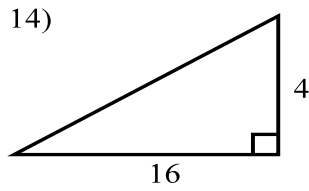


$$x = 57.53m^2$$

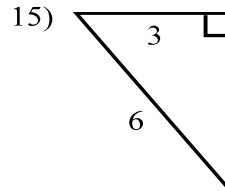
Find the length of the missing side.



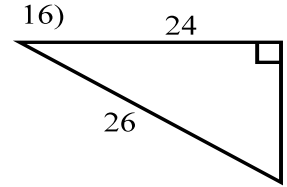
$$\begin{aligned} a^2 + b^2 &= c^2 \\ 8^2 + 15^2 &= c^2 \\ 64 + 225 &= c^2 \\ 289 &= c^2 \\ \sqrt{289} &= \sqrt{c^2} \\ 17 &= c \end{aligned}$$



$$c = 16.49$$



$$\begin{aligned} a^2 + b^2 &= c^2 \\ 3^2 + b^2 &= 6^2 \\ 9 + b^2 &= 36 \\ b^2 &= 27 \\ \sqrt{b^2} &= \sqrt{27} \\ b &= 5.2 \end{aligned}$$



$$b = 10$$

Given the length of one side of the 45-45-90 triangle at the right find the other two sides to the nearest tenth..

17)  $J = 15$   
 $K = 15$   
 $L = 15\sqrt{2}$

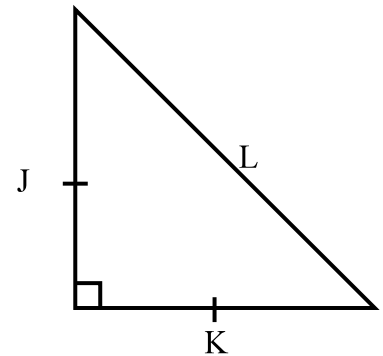
18)  $K = 14$   
 $J = 14$   
 $L = 14\sqrt{2}$

19)  $K = 6$   
 $J = 6$   
 $L = 6\sqrt{2}$

20)  $L = 20\sqrt{2}$   
 $K = 20$   
 $J = 20$

21)  $L = 11\sqrt{2}$   
 $K = 11$   
 $J = 11$

22)  $J = 3\sqrt{2}$   
 $K = 3\sqrt{2}$   
 $L = 3\sqrt{2} \cdot \sqrt{2}$   
 $L = 3 \cdot 2$   
 $L = 6$



23)  $L = 18$

$$K = \frac{18 \cdot \sqrt{2}}{\sqrt{2} \cdot \sqrt{2}}$$

$$K = \frac{18\sqrt{2}}{2}$$

$$K = 9\sqrt{2}$$

$$J = 9\sqrt{2}$$

24)  $J = 17$

$$K = 17$$

$$L = 17\sqrt{2}$$

25)  $K = 10\sqrt{2}$

$$J = 10\sqrt{2}$$

$$L = 20$$

26)  $L = 8$

$$K = 4\sqrt{2}$$

$$J = 4\sqrt{2}$$

Given the length of one side of the 30-60-90 triangle at the right find the other sides to the nearest tenth.

27)  $U = 5$

$$T = 5\sqrt{3}$$

$$V = 10$$

28)  $U = 15$

$$T = 15\sqrt{3}$$

$$V = 30$$

29)  $V = 16$

$$U = 8$$

$$T = 8\sqrt{3}$$

30)  $T = 12\sqrt{3}$

$$U = 12$$

$$V = 24$$

31)  $U = 9$

$$T = 9\sqrt{3}$$

$$V = 18$$

32)  $V = 32$

$$U = 16$$

$$T = 16\sqrt{3}$$

33)  $T = 7\sqrt{3}$

$$U = 7$$

$$V = 14$$

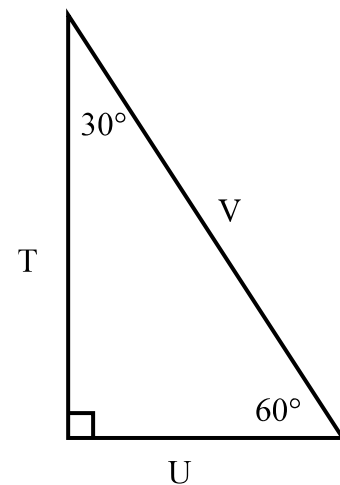
34)  $U = 2\sqrt{3}$

$$T = 2\sqrt{3} \cdot \sqrt{3}$$

$$T = 2 \cdot 3$$

$$T = 6$$

$$V = 4\sqrt{3}$$



$$35) U = 13\sqrt{3}$$

$$T = 13\sqrt{3} \cdot \sqrt{3}$$

$$T = 13 \cdot 3$$

$$T = 39$$

$$V = 26\sqrt{3}$$

$$36) T = 17$$

$$U = \frac{17}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}}$$

$$U = \frac{17\sqrt{3}}{3}$$

$$V = \frac{34\sqrt{3}}{3}$$