Geometry Review 2.1 (KEY)
Algebra 2

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

1) Circle

radius = 5 in

diameter = 2(5in.) = 10 in.

Circum. = 10π in. = 31.4 in

Area = $\pi(5\text{in.})^2$ = 25π in^2 = 78.5 in^2

2) Circle

r = 78 mm / 2 = 39 mm

d = 78π mm / π = 78mm

C = 78π mm = 245 mm

A = $\pi(39\text{ mm})^2$ = 1,521π mm^2 = 4,778.4 mm^2

3) Circle

r = 49.3 m / 2 = 24.7 m

d = 155m / π = 49.3 m

C = 155 m

A = $\pi(24.7\text{ m})^2$ = 610.1 π m^2 = 1916.7 m^2

4) Circle

r = $\sqrt{94\ ft^2/\pi}$ = 5.5 ft

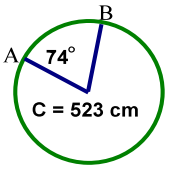
d = 2 (5.5 ft) = 11 ft

C = 2π(5.5 ft) = 11π ft = 34.6 ft

A = 94 ft^2

Find the length of minor arc AB using a proportion.

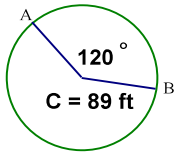
5)



$\frac{74^\circ}{360^\circ} = \frac{\overset{\frown}{AB}}{523cm}$

$\overset{\frown}{AB} = 107.5cm$

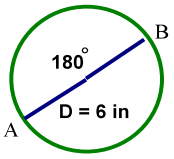
6)



$\frac{120^\circ}{360^\circ} = \frac{\overset{\frown}{AB}}{89\ ft}$

$\overset{\frown}{AB} = 29.7\ ft$

7)

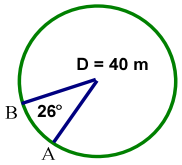


$C = 2\pi(3in) = 18.8\ in$

180° *is half of* 360°.

SemicircleAB = 9.4 *in*

8)



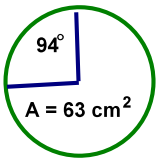
$C = 2\pi(20m) = 125.7\ in$

$\frac{26^\circ}{360^\circ} = \frac{\overset{\frown}{AB}}{40\ m}$

$\overset{\frown}{AB} = 2.9\ m$

Find the area of the sector using a proportion.

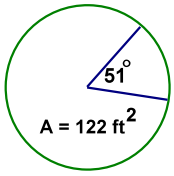
9)



$\frac{94^\circ}{360^\circ} = \frac{sect.}{63\ cm^2}$

Sect Area = $16.5cm^2$

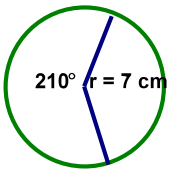
10)



$\frac{51^\circ}{360^\circ} = \frac{sect.}{122\ ft^2}$

Sect Area = $17.3ft^2$

11)

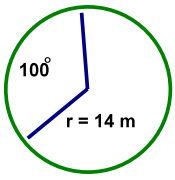


$A = \pi(7cm)^2 = 153.9cm^2$

$\frac{210^\circ}{360^\circ} = \frac{sect}{153.9cm^2}$

Sect. Area = $89.8cm^2$

12)



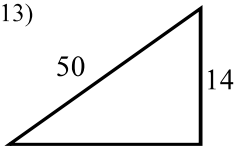
Circle Area = $615.8m^2$

$\frac{100^\circ}{360^\circ} = \frac{sect.}{615.8m^2}$

Sect Area = $171.1m^2$

Find the length of the missing side.

13)



$A^2 + 14^2 = 50^2$

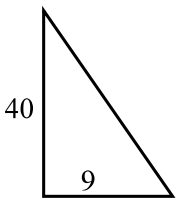
$A^2 + 196 = 2{,}500$

$-196 \quad -196$

$\sqrt{A^2} = \sqrt{2{,}304}$

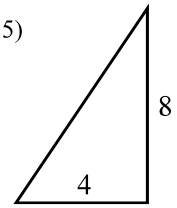
A = 48

14)



C = 41

15)

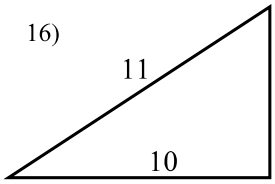


$C = \sqrt{80}$

$C = \sqrt{16 \bullet 5}$

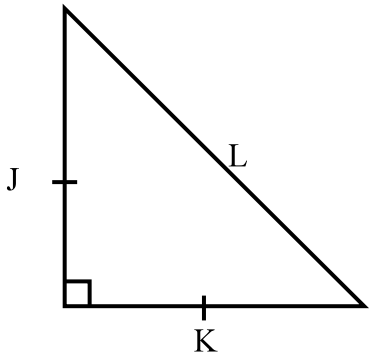
$C = 4\sqrt{5}$

16)



$B = \sqrt{21}$

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 = 7

K = 7

$L = 7\sqrt{2} = 9.9$

18) K = 10

J = 10

$L = 10\sqrt{2} = 14.1$

19) K = 4

J = 4

$L = 4\sqrt{2} = 5.7$

20) $L = 6\sqrt{2}$

$K = \frac{6\sqrt{2}}{\sqrt{2}} = 6$

J = 6

21) $L = 9\sqrt{2}$

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

K = 9

22) $J = 5\sqrt{2}$

L = 10

$K = 5\sqrt{2} = 7.1$

23) L = 24

$K = 24 \div \sqrt{2} = 17.0$

J = 17.0

24) J = 14

K = 14

$L = 14\sqrt{2} = 19.8$

25) $K = 12\sqrt{2}$

$J = 12\sqrt{2} = 17.0$

$L = 12\sqrt{2}\ \sqrt{2}$

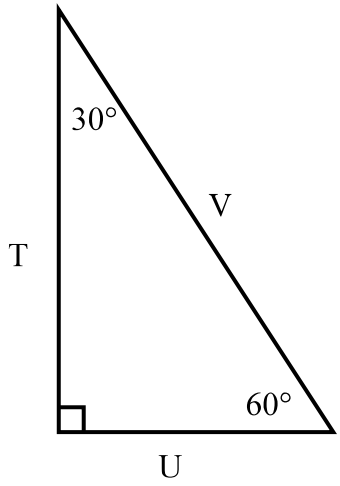
$= 12 * 2 = 24$

26) L = 17

$J = 17 \div \sqrt{2} = 12.0$

$K = 17 \div \sqrt{2} = 12.0$

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 = 10

$V = 2*10 = 20$

$T = 10\sqrt{3} = 17.3$

28) U = 22

$V = 22*2 = 44$

$T = 22\sqrt{3} = 38.1$

29) V = 8

$U = 8 \div 2 = 4$

$T = 4\sqrt{3} = 6.9$

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

$U = \frac{7\sqrt{3}}{\sqrt{3}} = 7$

$V = 7*2 = 14$

31) U = 13

$V = 13*2 = 26$

$T = 13\sqrt{3} = 22.5$

32) V = 16

$U = 16 \div 2 = 8$

$T = 8\sqrt{3} = 13.9$

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

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

$V = 2*3 = 6$

34) U = 6

$T = 6\sqrt{3} = 10.4$

$V = 6*2 = 12$

35) $U = 4\sqrt{3}$

$T = 4\sqrt{3}\ \sqrt{3} = 4*3 = 12$

$V = 2*4\sqrt{3} = 8\sqrt{3} = 13.9$

36) T = 9

$U = 9 \div \sqrt{3} = 5.2$

$V = 2*9 \div \sqrt{3} = 10.4$