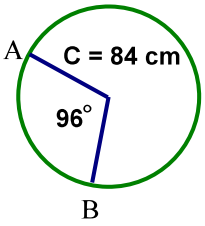
Geometry Review 3.2 KEY

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

1) r = 28m d = 56m C = 56πm = 175.9m A = $784\pi m^2$ = $2463.0m^2$

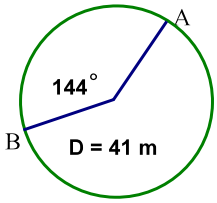
2) r = 5.4cm d = 10.8cm C = $10.8\pi cm$ = $33.9cm$ A = 92 cm^2

Find the length of minor arc AB using a proportion.

3) 

$\frac{96^\circ}{360^\circ} = \frac{x}{84cm}$

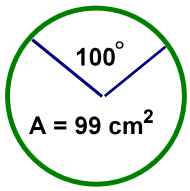
$x = 22.4cm$

4) 

$\frac{144^\circ}{360^\circ} = \frac{x}{41\pi m}$

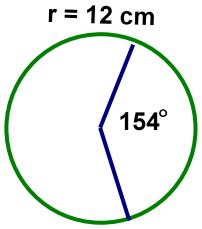
$x = 51.5m$

Find the area of the sector using a proportion.

5) 

$\frac{100^\circ}{360^\circ} = \frac{x}{99cm^2}$

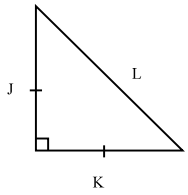
$x = 27.5cm^2$

6) 

$\frac{154^\circ}{360^\circ} = \frac{x}{144\pi cm^2}$

$x = 193.5cm^2$

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



7) J = 18

K = 18, L = $18\sqrt{2}$

8) K = $16\sqrt{2}$

J = $16\sqrt{2}$, L = 32

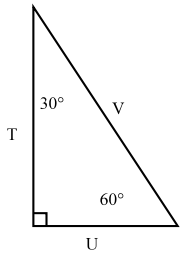
9) L = $32\sqrt{2}$

J = 32, K = 32

10) L = 58

J = $29\sqrt{2}$, K = $29\sqrt{2}$

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



11) U = 12

T = $12\sqrt{3}$, V = 24

12) U = $15\sqrt{3}$

V = $30\sqrt{3}$, T = 45

13) V = 64

U = 32, T = $32\sqrt{3}$

14) T = $43\sqrt{3}$

U = 43, V = 36

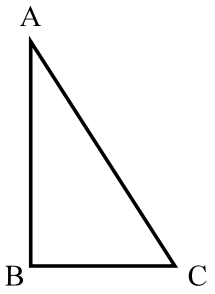
15) T = 71

U = $\frac{71\sqrt{3}}{3}$, V = $\frac{142\sqrt{3}}{3}$

16) V = $36\sqrt{3}$

U = $18\sqrt{3}$, T = 54

In the figure at the right the ratio $\frac{Opposite\angle A}{Adjacent\angle A} = \frac{16}{63}$.



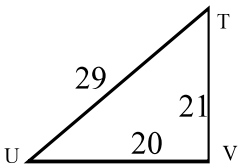
17) BC = 48, find AB and AC.

AB = 189, AC = 195

18) AC = 325, find BC and AB.

BC = 80, AB = 315

Use ΔQRS to find each trig. ratio. Use a calculator to approximate each ratio to four decimal places.



19) Sin ∠U

21/29 = .7241

20) Tan ∠T

20/21 = .9524

21) Cos ∠F

∠F can't be the reference angle.

22) Cos ∠T

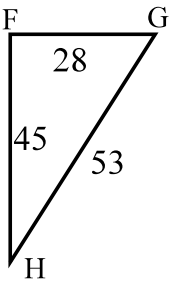
21/29 = .7241

23) Cos ∠G

28/53 = .5283

24) Tan ∠ H

28/45 = .6222



25) Sin ∠ H

28/53 = .5283

26) Tan ∠U

21/20 = 1.05

27) Cos ∠U

20/29 = .6897

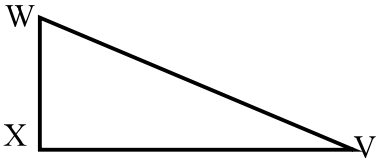
28) Sin ∠G

45/53 = .8491

Given a trig ratio for the triangle to the right, give the missing trig ratios.

Sin ∠V = 39/89

Tan ∠W = 77/36



29) Find Cos ∠W

39/89 = .4382

31) Find Sin ∠V

36/85 = .4238

30) Find Tan ∠V

39/80 = .4875

32) Find Tan ∠W

77/36 = 2.1389

33) Find Sin ∠X

∠X can't be the ref. angle.

Find the angle measure in degrees for the given number of rotations.

34) 2/3

240°

35) 1/4

90°

36) 5/6

300°

37) 3/8

136°

38) 7/4

630°

39) 10/3

1,200°

Convert the given measure in degrees to radian measure.

40) 270°

$\frac{3\pi}{2}$ rad

41) 120°

$\frac{2\pi}{3}$ rad

42) 45°

$\frac{\pi}{4}$ rad

43) 135°

$\frac{3\pi}{4}$ rad

44) 315°

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

45) 510^0

$\frac{510\pi}{180}$ rad

Convert the given measure in radians to degrees.

46) 3π rad

540°

47) 8π rad

1,440°

48) $\frac{3\pi}{4}$ rad

135°

49) $\frac{11\pi}{6}$ rad

330°

50) $\frac{5\pi}{3}$ rad

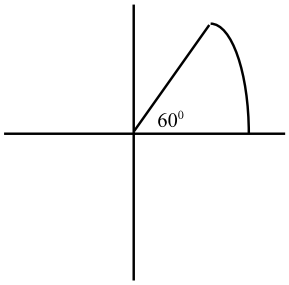
300°

51) $\frac{14\pi}{3}$ rad

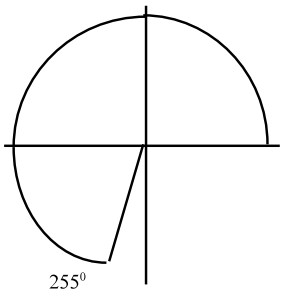
840°

Draw the following angles in standard position.

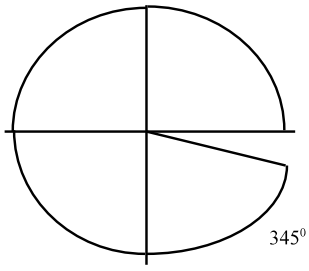
52) 60°



53) 255°



54) 345°



55) -135°