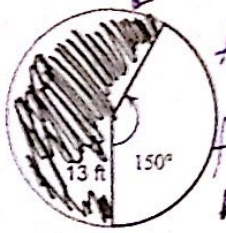
CCSS Geometry Name_____ ID: 1

G6 B Level Test Review

Date_____ Period____

Find the arc length AND the area of the sector of the SHADED side. Round your answers to the nearest hundredth.

1)



$360-150=210$

$A.L.=\frac{210}{360}\cdot 2\cdot\pi\cdot 13\text{ ft}$

$A.L.=\frac{91}{6}\pi\text{ ft}$

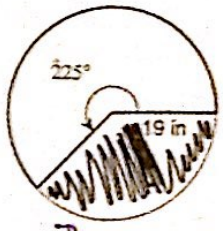
$A.L.\approx 47.65\text{ ft}$

$S.A.=\frac{210}{360}\pi(13)^2$

$S.A.=\frac{1183}{12}\pi\text{ ft}^2$

$S.A.\approx 309.71\text{ ft}^2$

2)



$360-225=135°$

$A.L.=\frac{135}{360}\cdot 2\cdot\pi\cdot 19$

$A.L.=14.25\pi\text{ in}$

$A.L.=\frac{57}{4}\pi\text{ in}$

$A.L.\approx 44.7\text{ in}$

$S.A.=\frac{135}{360}\cdot\pi(19)^2$

$S.A.=135.375\text{ in}^2=\frac{1083}{8}\pi\text{ in}^2$

$S.A.\approx 425.29\text{ in}^2$

Find the area of each. Use your calculator's value of π. Round your answer to the nearest tenth.

3) circumference = 50.3 m

$C=\pi\cdot d$

$\frac{50.3\text{m}}{\pi}=\frac{\pi d}{\pi}$

$d=16.01\text{m}$

$r=\frac{d}{2}=\frac{16.01\text{m}}{2}=8.005\text{m}$

$A=\pi(8.005\text{m})^2$

$A\approx 201.31\text{m}^2$

4) area = 295.6 ft²

$A=\pi r^2$

$\frac{295.6\text{ft}^2}{\pi}=\frac{\pi r^2}{\pi}$

$\sqrt{r^2}=\sqrt{94.092\text{ft}^2}$

$r=9.70\text{ft}$

Find the diameter of each circle. Use your calculator's value of π. Round your answer to the nearest tenth.

$d=2(r)$

$d=2(9.70\text{ft})$

$d=19.4\text{ft}$

Identify the center and radius of each. Then sketch the graph.

5) $(x-4)^2+(y-4)^2=3$

center = (4, 4)

radius = $\sqrt{3}\approx 1.73$

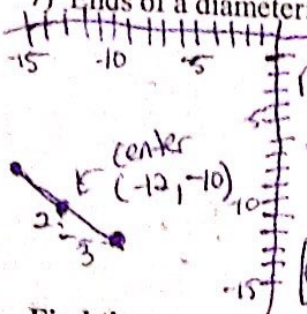
6) $(x-4)^2+(y+1)^2=7$

center = (4, -1)

radius = $\sqrt{7}\approx 2.65$

Use the information provided to write the equation of each circle.

7) Ends of a diameter: (−15, −8) and (−9, −12)



$r = \sqrt{(-9-(-12))^2+(-12-(-10))^2}$

$r = \sqrt{(3)^2+(-2)^2}$

$r = \sqrt{9+4} = \sqrt{13}$

$(x+12)^2+(y+10)^2=13$

8) Center: (13, 11)
Point on Circle: (7, 11)

center

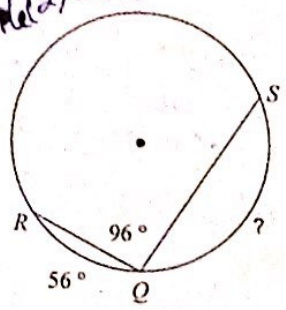
$r = 13-7=6$

$(x-13)^2+(y-11)^2=6^2$

$(x-13)^2+(y-11)^2=36$

Find the measure of the arc or angle indicated.

9)



$m\angle(2) = 192°$

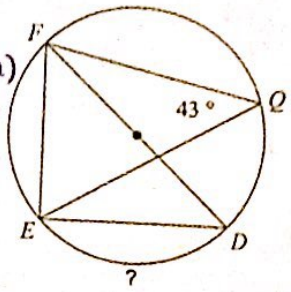
$56+192+?=360°$

$248+?=360$

$-248 \quad -248$

$?=112°$

10)



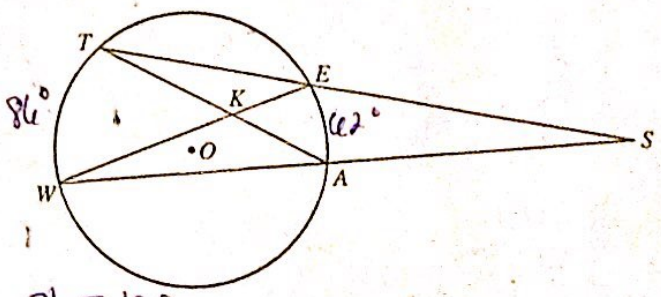
$43(2) = 86°$

$86+?=180$

$-86 \quad -86$

$?=94°$

In $\odot O$, $m\overset{\frown}{WT} = 86°$ and $m\overset{\frown}{EA} = 62°$.



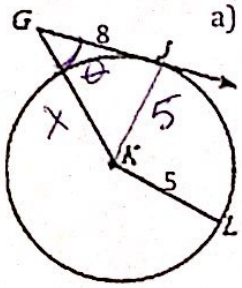
21. Find $m\angle EWA$. $\frac{62}{2} = 31°$

22. Find $m\angle WET$. $\frac{86}{2} = 43°$

23. Find $m\angle WES$. $180-43 = 137°$

24. Find $m\angle WST$. $180-137-31 = 12°$

10. GJ is tangent to circle K, $JG = 8$ and $KL = 5$



a) Find the length of KG.

$8^2+5^2=x^2$

$x^2=64+25$

$x^2=89 \rightarrow x=\sqrt{89}$

$x \approx 9.43$

b) Find the measure of $\angle JGK$

$\theta = \tan^{-1}\left(\frac{5}{8}\right)$

$\theta = 32°$

11. Put the general form of this circle into standard form (center-radius form).

$x^2 - 6x + y^2 + 2y + 3 = 0$

$(x-3)^2 = x^2-6x+9$

$(y+1)^2 = y^2+2x+1$

$x^2-6x+9+y^2+2y+1+3=9+1$

$(x-3)^2+(y+1)^2+3=10$

$-3 \quad -3$

$(x-3)^2+(y+1)^2=7$