Name: Key

Circle Practice Test Answers

Directions: Place all of your answers on the lines provided. Be sure to use exact values when asked. If using trig, please round to the nearest tenth. Don't forget units.

1. A	17. x = 110° y = 100° z = 100°
2. A	18. x = 2
3. B	19. CD= 18
4. D	20. CD= $8\sqrt{11}$ m
5. B	21. r= $10\sqrt{5}$
6. C	22. $m\widehat{TR}$ = 63.4° $m\widehat{SR}$ = 126.8°
7. A	23. BC = 36in AB = $18\sqrt{3}$ in
8. B	24. x= 1
9. A	25. Yes because it forms a RT < by pyth. thm.
10. A= 196π km^2	26. C= $16\sqrt{2}\pi$ m
11. L= $\frac{45\pi}{4}$ mi	27. L= $35\pi/3$ cm
12. x= 52°	28. m<BCD= 65°
13. <AFE= 70°	29. m<RST= 81°
14. ?= 125°	
15. x= 96°	
16. <BAD= 52.5° $m\widehat{BD}$ = 105°	

Name: Key Class: _____ Date: _____ ID: A

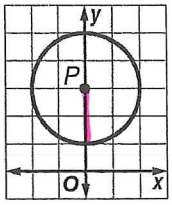
Circle Practice Test 2017

Multiple Choice
Identify the choice that best completes the statement or answers the question.

A 1. Find the center of the circle whose equation is $(x + 11)^2 + (y - 7)^2 = 121$.
a. $(-11, 7)$
b. $(11, -7)$
c. $(121, 49)$
d. 11

(-11, 7)

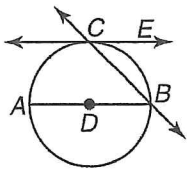
A 2. Find the equation of $\odot P$.



r = 2
(0, 3)

a. $x^2 + (y - 3)^2 = 4$.
b. $x^2 + (y - 3)^2 = 2$.
c. $(x - 3)^2 + y^2 = 2$
d. $(x - 3)^2 + y^2 = 4$

Use $\odot D$.



B 3. Name a radius.
a. $\overline{AB}$
b. $\overline{DB}$
c. $\overline{CB}$
d. $\overleftrightarrow{CE}$

D 4. Name a tangent.
a. $\overline{AB}$
b. $\overline{DB}$
c. $\overleftrightarrow{CB}$
d. $\overleftrightarrow{CE}$

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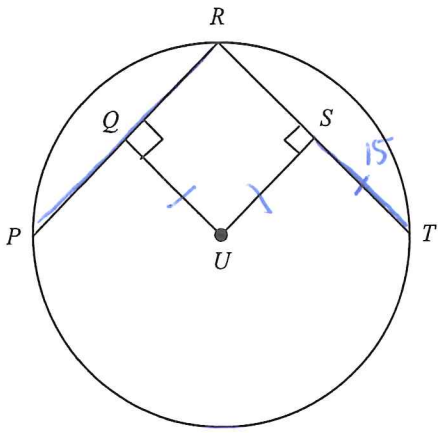
B

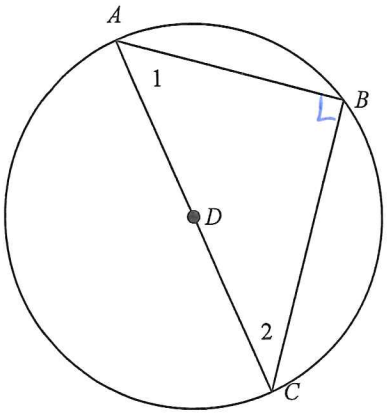
5. In $\odot U$, $TS = 15$, $UQ = US$. Find $m\overline{PR}$.



a. 28
b. 30
c. 15
d. 39

C

6.



If $m\angle 1 = 4x + 6$, $m\angle 2 = 8x$, find $m\angle 1$.

a. 64
b. 56
c. 34
d. 38

$90 + 4x + 6 + 8x = 180$ Δ Sum

$12x + 96 = 180$

$12x = 84$

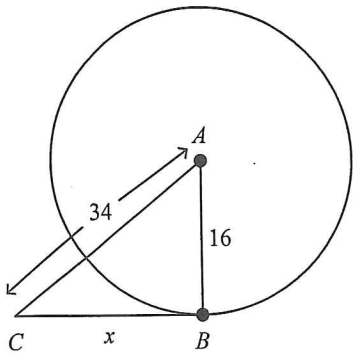
$x = 7$

$\angle 1 = 4 \cdot 7 + 6$

Name: _____ ID: A

A

7. Find x. Assume that segments that appear tangent are tangent.



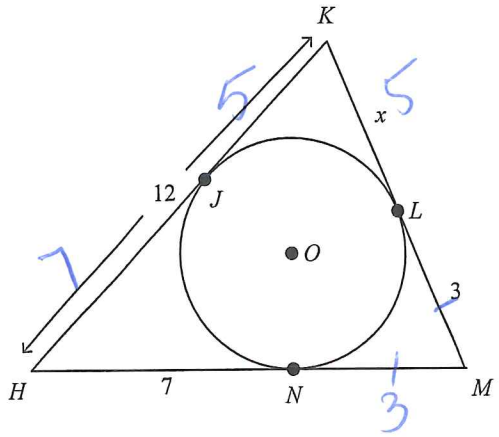
$x^2 + 16^2 = 34^2$

$x^2 = 900$

a. 30
b. 17
c. 46
d. 23

B

8. Find x. Assume that segments that appear tangent are tangent.



a. 7
b. 5
c. 9
d. 3

A

9. Write an equation for a circle with center at (–6, 10) and diameter 6.

$r = 3$

a. $(x+6)^2 + (y-10)^2 = 9$
b. $(x+6)^2 + (y-10)^2 = 36$
c. $(x-6)^2 + (y+10)^2 = 9$
d. $(x-6)^2 + (y+10)^2 = 36$

Short Answer

10. Given that the circumference is 28π km, find the exact area.

$28\pi = d\pi$

$d = 28$

$r = 14$

$A = 14^2\pi$

$A = 196\pi \text{ km}^2$

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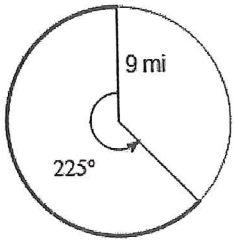
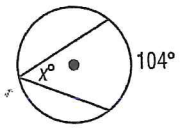
11. Find the arc length as an exact value.



$\frac{225}{360} \cdot 18\pi = \frac{4050\pi}{360}$

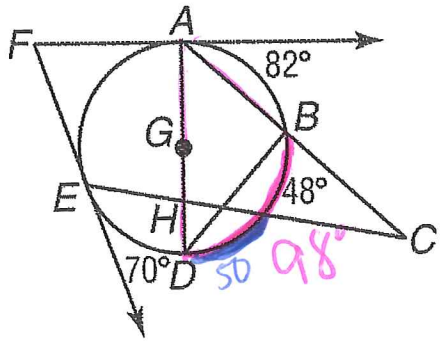
$d = \frac{45\pi}{4}$ mi

12. Find x.

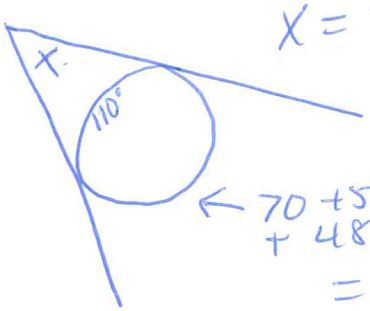


$x = 52°$

13. **Use $\odot G$ with $\overrightarrow{FA}$ and $\overrightarrow{FE}$ tangent at A and E.** Find $m\angle AFE$.



98°

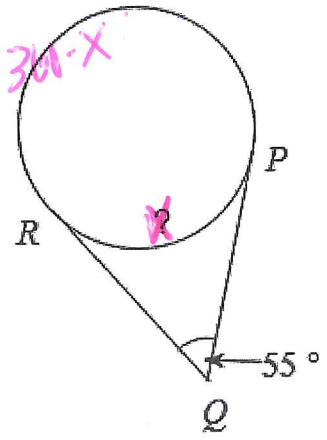


$x = \frac{1}{2}(250 - 110)$

$x = 70°$

$70 + 50 + 48 + 82 = 250$

14. Find the measure of the arc.



$55 = \frac{1}{2}(360 - x - x)$

$55 = \frac{1}{2}(360 - 2x)$

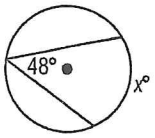
$55 = 180 - x$

$-125 = -x$

$125° = x$

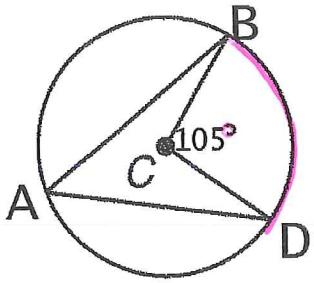
Name: _____ ID: A

15. Find x.



96°

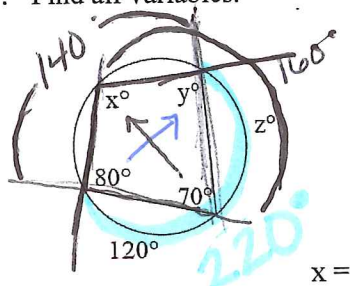
16. Find $m\angle BAD$ and $m\overset{\frown}{BD}$.



$m\angle BAD = 52.5°$

$m\overset{\frown}{BD} = 105°$

17. Find all variables.



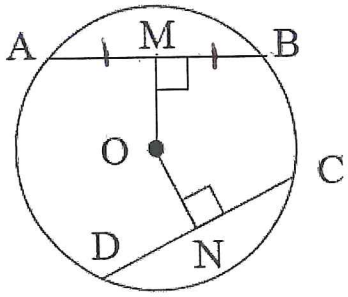
220°

$120 + z = 220$

$z = 100$

x = 110° y = 100° z = 100°

18. Find x if AM = 4x - 5 and BM = -5x + 13.



$4x - 5 = -5x + 13$

$9x - 5 = 13$

$9x = 18$

$x = 2$

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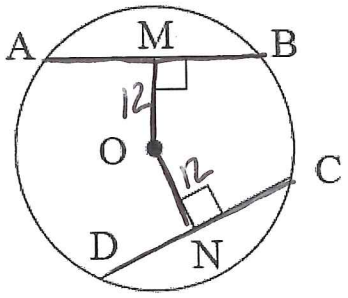
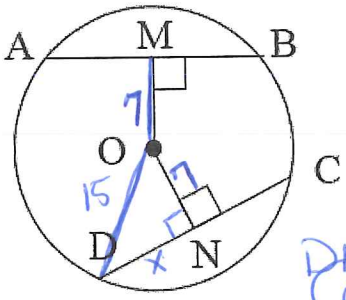
19. AB = 18, OM = 12, ON = 12, find CD.



CD = 18

20. Radius of circle O is 15m, OM = 7m, ON = 7m, find CD.



$x^2+7^2=15^2$

$x^2=176$

$DN=4\sqrt{11}$

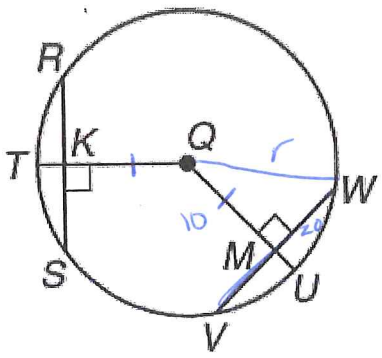
$CD=8\sqrt{11}$ m

$\sqrt{176}$

$\sqrt{16}\ \sqrt{11}$

4

21. Find the radius QR of the circle if QM=QK, WV = 40 and QK = 10



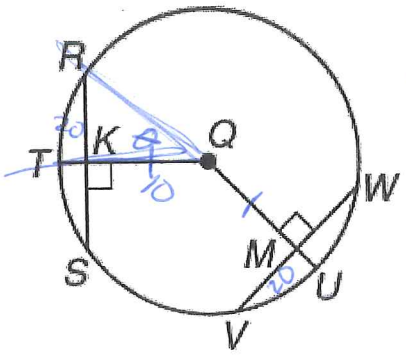
$10^2+20^2=r^2$

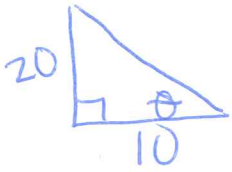
$500=r^2$

$10\sqrt{5}=r$

Name: _____ ID: A

22. Find $m\widehat{TR}$ and $m\widehat{SR}$ if QM=QK, WV = 40 and QK = 10



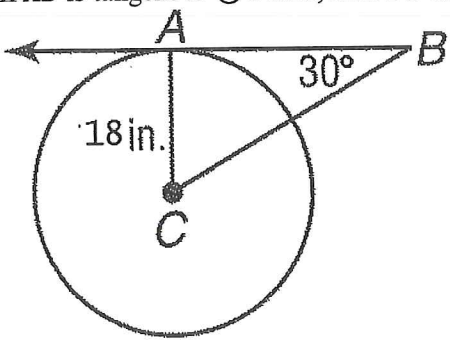


$\tan\theta = \frac{20}{10}$

$\theta = 63.4°$

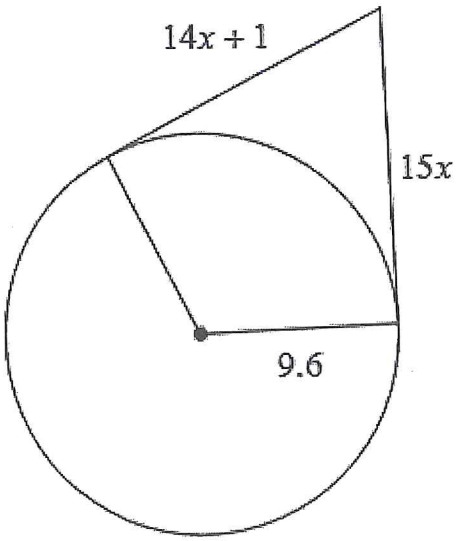
$m\widehat{TR}$ = 63.4° $m\widehat{SR}$ = 126.8°

23. If $\overline{AB}$ is tangent to $\odot C$ at A, find BC and AB. *(Use exact values).*



BC= 36in AB = 18√3in

24. Find x.

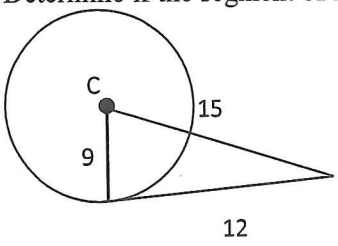


$14x + 1 = 15x$

$1 = x$

Name: _____ ID: A

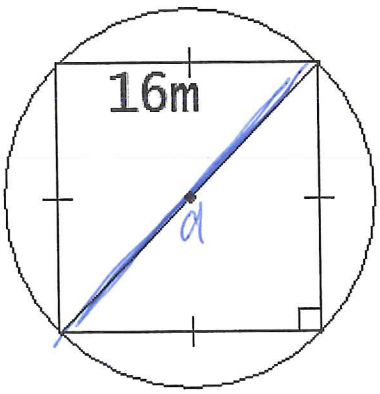
25. Determine if the segment of length 12 is tangent to the circle, explain your reasoning.



$9^2+12^2=15^2$? yes because

$225=225$

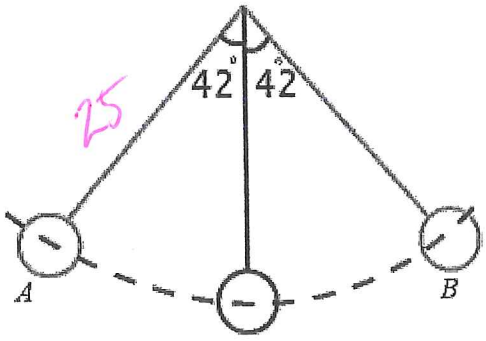
26. Find the exact circumference in terms of pi.



$d=16\sqrt{2}\,m$

$C=16\sqrt{2}\pi\,m$

27. If a pendulum 25 centimeters long swings to an angle of 42° from its center on each side, then find the **arc length** from A to B. Round to the nearest hundreth. If you answer 84 degrees you are incorrect.



$l=\frac{84}{360}\cdot 50\pi$

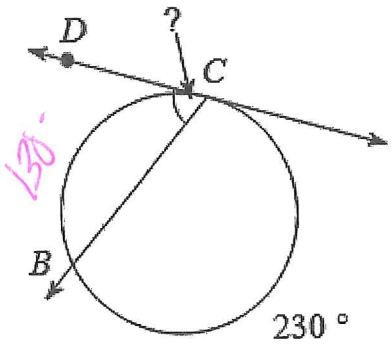
$\frac{4200\pi}{360}$

$\frac{35\pi}{3}$ cm

length of $\overset{\frown}{AB}$= _____

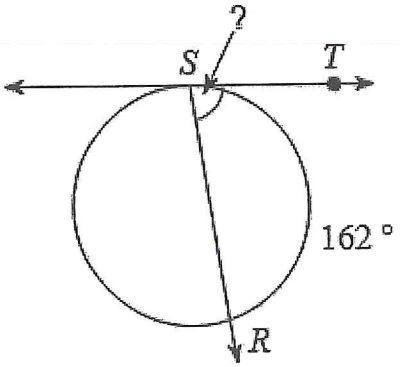
Name: _____ ID: A

28. Find $m\angle BCD$.



$\angle BCD = 65$

29. Find $m\angle RST$.



$\angle RST = 81°$