Accelerated Geometry EOCT REVIEW
CIRCLES

I. ARC LENGTH AND AREA

For # 8-13, determine the length of the arc and area of the sector with given central angle measure, m<W. Round final answer to the nearest hundredth.

8. $m\angle W = 45°; r = 5$ L=3.93 A=9.82
9. $m\angle W = 90°; r = 10$ L=15.71 A=78.54
10. $m\angle W = 60°; r = 8$ L=8.38 A=33.51
11. $m\angle W = 120°; r = 20$ L=41.89 A=418.88
12. $m\angle W = 76°; r = 5.2$ L=6.90 A=17.93
13. $m\angle W = 196°; r = 12$ L=41.05 A=246.30

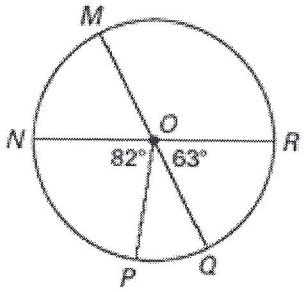
Determine the degree measure of an arc with the given length, *L*, in a circle with radius *r*. Round your answers to the nearest whole degree.

14. $L = 10; r = 7$ 82°
15. $L = 14; r = 20$ 40°
16. $L = 25; r = 12$ 119°
17. $L = 36; r = 18$ 115°
18. $L = 7; r = 13$ 31°
19. $L = 4.2; r = 6$ 40°

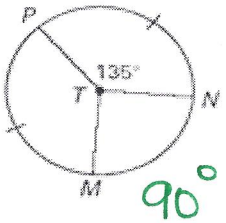
II. CENTRAL ANGLES AND CHORD LENGTHS

$\overline{MQ}$ and $\overline{NR}$ are diameters. Find the indicated measure.

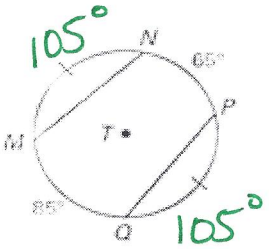
9. $m\overset{\frown}{MN}$ 63°
10. $m\overset{\frown}{NQ}$ 117°
11. $m\overset{\frown}{NQR}$ 180°
12. $m\overset{\frown}{MRP}$ 215°
13. $m\overset{\frown}{QR}$ 63°
14. $m\overset{\frown}{MR}$ 117°
15. $m\overset{\frown}{QMR}$ 297°
16. $m\overset{\frown}{PQ}$ 35°
17. $m\overset{\frown}{PRN}$ 278°
18. $m\overset{\frown}{MQN}$ 297°



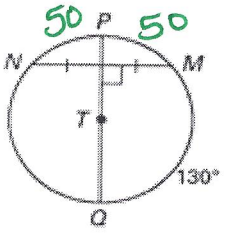
Find the measure of *MN*.

19. 

90°

20. 

105°

21. 

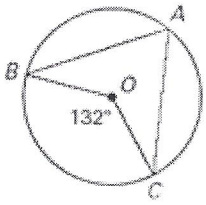
100°

Accelerated Geometry EOCT REVIEW
CIRCLES

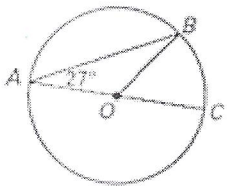
III. INSCRIBED ANGLES

Find the measure of the indicated arc or angle in ⊙O.

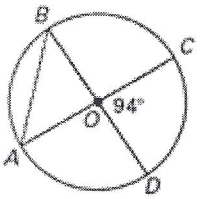
1. $m\angle BAC =$? 66°



2. $m\overset{\frown}{BC} =$? 54°



3. $m\angle BAC =$? 43°



Find the measure of the arc or angle in ⊙O, given $m\overset{\frown}{CD} = 108°$ and $m\overset{\frown}{BE} = 100°$.

90° 4. $m\angle ABC$

50° 6. $m\angle BDE$

36° 8. $m\angle ABD$

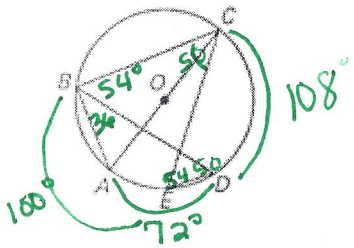
72° 10. $m\overset{\frown}{AD}$

5. $m\angle CED$ 54°

7. $m\angle CBD$ 54°

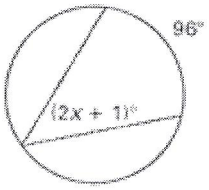
9. $m\angle BCE$ 50°

11. $m\overset{\frown}{ABC}$ 180°



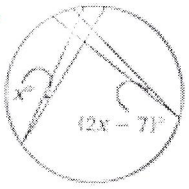
Find the value of x.

12.

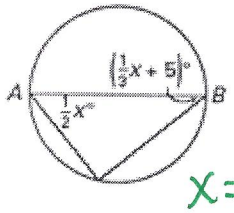


X = 24

X

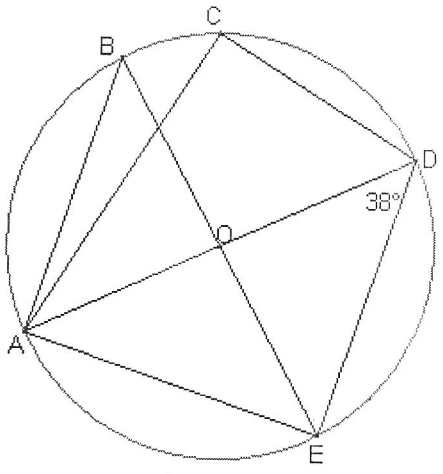


14. diameter $\overline{AB}$



X = 102

Use the information shown in circle O to complete problems 14 – 18.



14) $m\angle BAE$ 90°

15) $m\angle ABE$ 38°

16) $m\overset{\frown}{BD}$ 76°

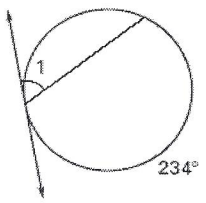
17) $m\overset{\frown}{ABE}$ 284°

18) $m\angle DAE$ 52°

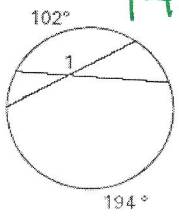
Accelerated Geometry EOCT REVIEW
CIRCLES

IV. ANGLES MEASURES WITH SECANTS AND TANGENTS

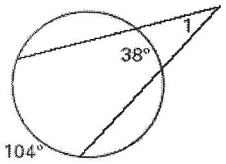
Find the measure of ∠1.

1. 

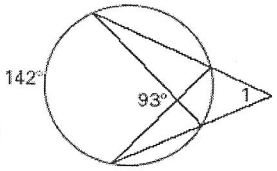
63°

2. 

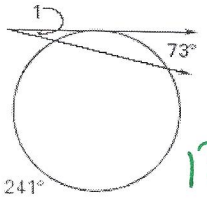
148°

3. 

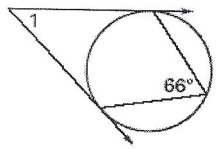
33°

4. 

49°

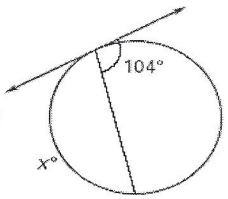
5. 

13.5°

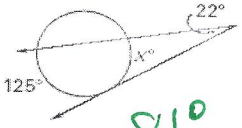
6. 

48°

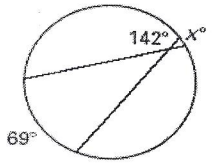
Write an equation that can be used to solve for x. Then solve the equation for x.

7. 

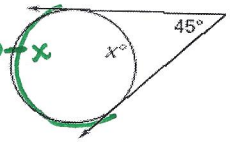
152°

8. 

81°

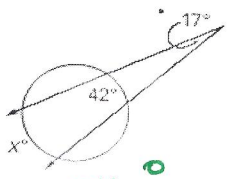
9. 

7°

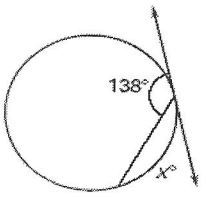
10. 

135°

$45 = \frac{(360-x)-x}{2}$

11. 

76°

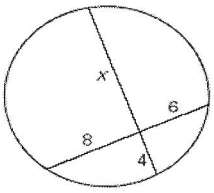
12. 

84°

V. SEGMENT LENGTHS IN CIRCLES

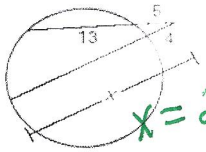
Fill in the blanks. Then find the value of x.

1. $x \cdot 4 = 8 \cdot 16$



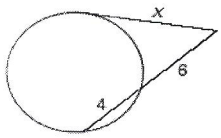
x=12

2. $4 \cdot x = 5 \cdot 18$



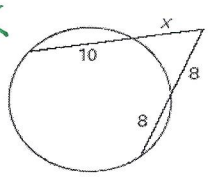
x=22.5

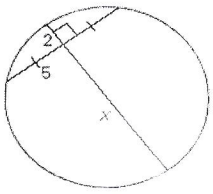
3. $x^2 = 6 \cdot 10$



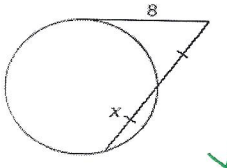
x=7.75

Find the value of x. Round to the nearest tenth, if necessary.

4. 

5. 

x=12.5

6. 

x=5.66

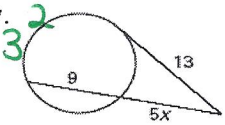
Accelerated Geometry EOCT REVIEW
CIRCLES

$31^2 = 20(20+x)$

$7(13) = x(x+4)$

$5x(5x+9) = 13^2$

7.



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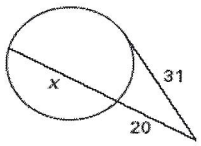
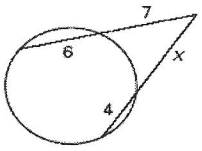
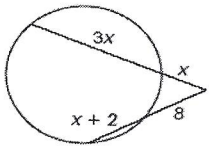


9.



10.



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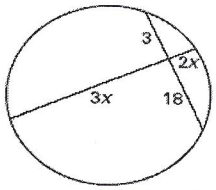

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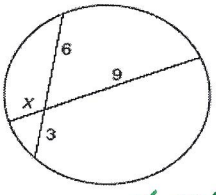

$x(4x) = 8(x+10)$

$x = 3$

$x = 2$

VI. VOLUME OF SPHERES

Find the volume of the sphere with radius *r* or diameter *d*.
Round your answers to the nearest hundredth.

13. $r = 14$ 11494.04 14. $d = 6.2$ 124.79 15. $r = 2.5$ 65.45

31. Explain what happens to the volume of a sphere when the diameter is doubled. 8 times larger

$$V = \frac{4}{3}\pi r^3$$