## Multiple Choice

Identify the choice that best completes the statement or answers the question.
$\qquad$ 1. O is the centre of this circle and point T is a point of tangency.

Determine the value of $x^{\circ}$.

a. $90^{\circ}$
b. $55^{\circ}$
c. $35^{\circ}$
d. $125^{\circ}$
$\qquad$ 2. O is the centre of this circle and point Q is a point of tangency.

Determine the value of $x^{\circ}$.

a. $139^{\circ}$
b. $49^{\circ}$
c. $41^{\circ}$
d. $90^{\circ}$
3. $O$ is the centre of this circle and point $G$ is a point of tangency.

Determine the value of $a$. If necessary, give your answer to the nearest tenth.

a. 11.3
b. 22.5
c. 4.6
d. 14.9
4. $O$ is the centre of this circle and point $A$ is a point of tangency.

Determine the value of $b$. If necessary, give your answer to the nearest tenth.

a. 5.5
b. 11
c. 23.2
d. 35.5
5. O is the centre of this circle and point A is a point of tangency.

Determine the value of $m$. If necessary, give your answer to the nearest tenth.

a. 7.2
b. 26.9
c. 15
d. 22.9
6. O is the centre of this circle and point T is a point of tangency.

Determine the value of $n$. If necessary, give your answer to the nearest tenth.

a. 5.7
b. 51
c. 24
d. 40.4
7. $O$ is the centre of this circle and point $Q$ is a point of tangency.

Determine the value of $t$. If necessary, give your answer to the nearest tenth.

a. 61.3
b. 55.7
c. 55
d. 82.2
8. A circle has radius 7 cm . Which of the following measures could NOT be the length of a chord in the circle: 2 $\mathrm{cm}, 11 \mathrm{~cm}, 14 \mathrm{~cm}$, or 17 cm ?
a. 17 cm
b. 11 cm
c. 2 cm
d. 14 cm
$\qquad$ 9. $O$ is the centre of the circle.

Determine the value of $v^{\circ}$.

a. $19^{\circ}$
b. $71^{\circ}$
c. $52^{\circ}$
d. $38^{\circ}$
10. $O$ is the centre of the circle.

Determine the value of $a^{\circ}$.

a. $49^{\circ}$
b. $20.5^{\circ}$
c. $41^{\circ}$
d. $69.5^{\circ}$
11. O is the centre of the circle.

Determine the value of $b^{\circ}$.

a. $144^{\circ}$
b. $81^{\circ}$
c. $72^{\circ}$
d. $18^{\circ}$
12. O is the centre of the circle.

Determine the value of $n$ to the nearest tenth, if necessary.

a. $\quad 13.5$
b. 4.4
c. 19
d. 1
13. $O$ is the centre of the circle.

Determine the value of $z$ to the nearest tenth, if necessary.

a. 4.5
b. 3.6
c. 5
d. 1
14. $O$ is the centre of the circle.

Determine the value of $s$ to the nearest tenth, if necessary.

a. 3
b. 7.1
c. $\quad 12.2$
d. 51
15. $O$ is the centre of this circle.

Identify all the inscribed angles subtended by the minor arc QS.

a. $\angle \mathrm{QOS}$
b. $\angle \mathrm{PQT}$ and $\angle \mathrm{PST}$
c. $\angle \mathrm{QPS}$ and $\angle \mathrm{QTS}$
d. $\angle \mathrm{QPS}$
16. $O$ is the centre of this circle.

Determine the value of $x^{\circ}$.

a. $180^{\circ}$
b. $44^{\circ}$
c. $88^{\circ}$
d. $90^{\circ}$
$\qquad$ 17. $O$ is the centre of this circle.

Determine the value of $q^{\circ}$.

a. $60^{\circ}$
b. $90^{\circ}$
c. $180^{\circ}$
d. $45^{\circ}$
$\qquad$ 18. $O$ is the centre of this circle. Determine the value of $n^{\circ}$.

a. $108^{\circ}$
b. $54^{\circ}$
c. $90^{\circ}$
d. $36^{\circ}$
19. $O$ is the centre of this circle.

Determine the value of $c^{\circ}$.

a. $90^{\circ}$
b. $44^{\circ}$
c. $180^{\circ}$
d. $88^{\circ}$
20. $O$ is the centre of this circle. Determine the value of $z^{\circ}$.
a. $55^{\circ}$
b. $110^{\circ}$
c. $90^{\circ}$
d. $70^{\circ}$


## Short Answer

21. Draw a line through point $P$ that is a NOT tangent to the circle.

$\cdot p$
22. O is the centre of this circle and point V is a point of tangency.

Determine the values of $a^{\circ}$ and $b^{\circ}$.

23. $O$ is the centre of this circle and point $Q$ is a point of tangency.

Determine the values of $d$ and $e^{\circ}$. If necessary, give your answers to the nearest tenth.

24. $O$ is the centre of this circle.

Which line segment is a diameter?

25. Point O is the centre of this circle.

Determine the values of $x^{\circ}$ and $y^{\circ}$.

26. Point O is the centre of this circle. Without solving for $s$, sketch and label the lengths of any extra line segments you need to draw to determine the value of $s$.

27. O is the centre of this circle. Is $\angle \mathrm{ACB}$ a central angle or an inscribed angle?

28. What is the relationship between the measures of $\angle W Y Y$ and $\angle W Z X$ ?

29. Point $O$ is the centre of the circle. Arc $A B$ is a semicircle. What is the measure of $\angle \mathrm{AOB}$ ?

30. Point O is the centre of this circle. Determine the values of $y^{\circ}$ and $z^{\circ}$.


## Circles Review Test

Answer Section

## MULTIPLE CHOICE

1. ANS: B
2. ANS: B
3. ANS: D
4. ANS: C
5. ANS: D
6. ANS: D
7. ANS: B
8. ANS: A
9. ANS: D
10. ANS: C
11. ANS: A
12. ANS: B
13. ANS: A
14. ANS: B
15. ANS: C
16. ANS: B
17. ANS: B
18. ANS: B
19. ANS: B
20. ANS: D

## SHORT ANSWER

21. Answers will vary. For example:

22. $a^{\circ}=63^{\circ}, b^{\circ}=56^{\circ}$
23. $d=24.1, e^{\circ}=28^{\circ}$
24. DE
25. $x^{\circ}=61^{\circ}, y^{\circ}=29^{\circ}$
26. Answers may vary. For example:

27. Inscribed angle
28. $\angle W Y X=\angle W Z X$
29. $\quad 180^{\circ}$
30. $y^{\circ}=68^{\circ}, z^{\circ}=136^{\circ}$
