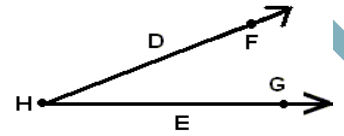## Geometry Sample Mcqs

1. Which of the following letters represents the vertex in the following picture?
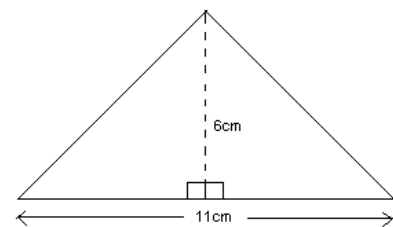

   A. D and E

   B. E and H

   C. F and G

   D. G only

   E. H only

2. If a circle has the diameter of 8, what is the circumference?
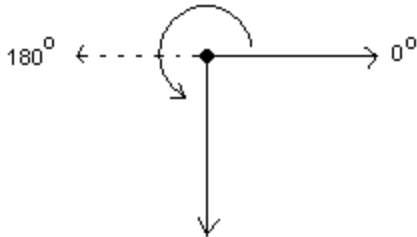
   A. 6.28

   B. 12.56

   C. 25.13

   D. 50.24

   E. 100.48

3. What is the area of the triangle below?

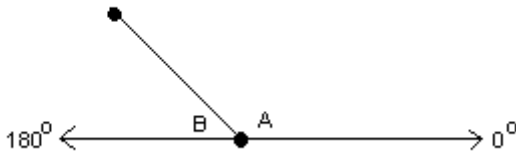   A. 22 cm^2

   B. 33 cm^2

   C. 44 cm^2

   D. 50 cm^2

   E. 66 cm^2

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4.   What is the measure of the solid line angle depicted by the following figure?

180° ← - - - (⤵ ● ⟶ 0°
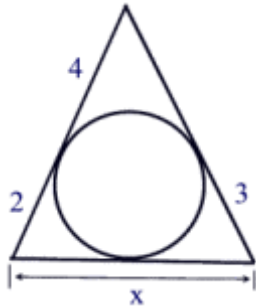   ↓

A.   90 degrees

B.   180 degrees

C.   225 degrees

D.   270 degrees

E.   0 degrees

5.   What is the measure of angle B in the following figure if angle A measures 135°?

180° ← —— B ● A —— ⟶ 0°

A.   40°

B.   45°

C.   50°

D.   135°

E.   225°

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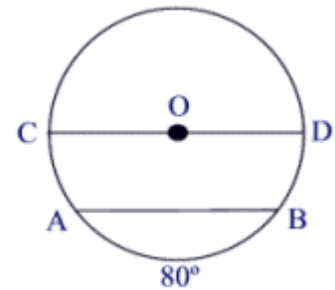6. In the diagram at the right, the segments shown are tangent to the circle. Find the value

of *x*.

A.   5
B.   6
C.   7
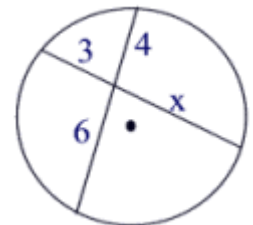D.   8

7. Given: Circle O with diameter $\overline{CD}$.
$\overline{AB} \parallel \overline{CD}$ and $m\overparen{AB} = 80°$.
Find $m\overparen{CA}$.

A.   50
B.   60
C.   80
D.   100

8. Given the circle at the right with two intersecting chords.
Find the length represented as x.

A.   2

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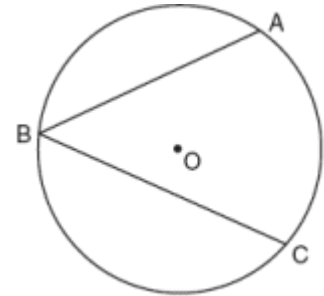**For Answers:** www.entrytest.com/testprep/answers.aspx

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B.   6

C.   8

D.   10

9.   In the accompanying diagram, tangent $\overline{AB}$ and secant $\overline{ACD}$ are drawn to circle O from point A, $AB = 6$ and $AC = 4$. Find AD.
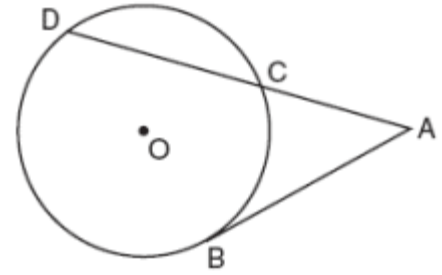
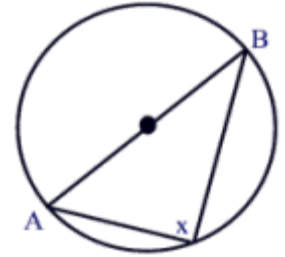A.   5

B.   9

C.   10

D.   13

10.   In the accompanying diagram of circle O, $m{<}ABC = 2x$ and $m\overset{\frown}{AC} = x + 60.$ Find the value of x.
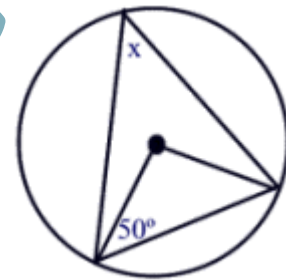
A.   20

B.   40

C.   60

D.   80

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11. Given the circle at the right with diameter $\overline{AB}$, find x.

A. 30°
B. 45°
C. 60°
D. 90°

12. Given a circle with the center indicated. Find x.

A. 100
B. 80
C. 50
D. 40

13. Two chords intersect within a circle to form an angle whose measure is 53°. If the intercepted arcs are represented by $3x + 3$ and $10x - 14$, find the measure of larger of these two arcs.

A. 9
B. 13

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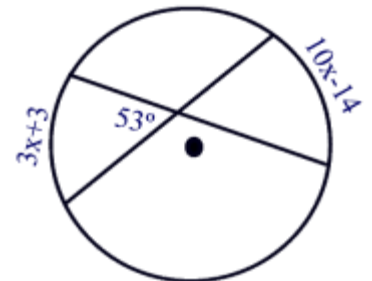
C.   30

D.   76

14.   A cathedral window is built in the shape of a semicircle. If the window is to contain three stained glass sections of equal size, what is the area of each stained glass section? Express answer to the *nearest square foot*.

5 feet
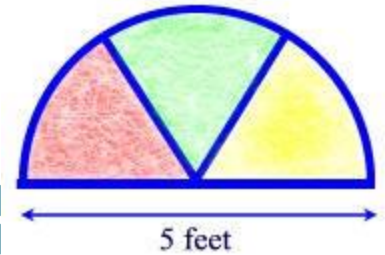
A.   1 sq. ft.

B.   3 sq. ft.

C.   13 sq. ft.

D.   26 sq. ft.

15.   Given the two secants shown in the diagram at the right, find the number of degrees in the angle labeled *x*.
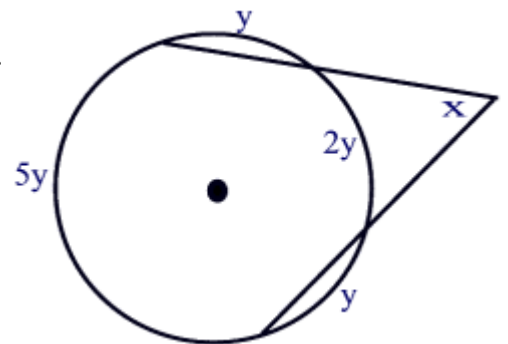
A.   40°

B.   60°

C.   80°

D.   140°

16.   The number of common tangents that can be drawn for two externally tangent circles is

A.   1

B.   2

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C.   3

D.   4

17.   Given tangent $\overline{AC}$ to the circle shown at the right. Find the size of the arc designated by

x.
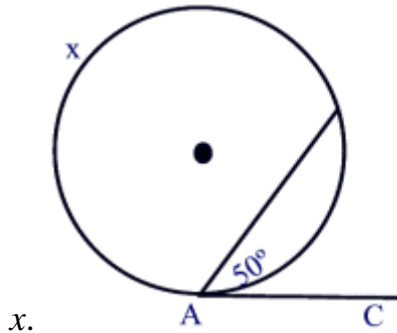
A.   25

B.   50

C.   100

D.   260

18.   Given a circle with two secants as shown at the right. Find the value of the arc designated by x.

A.   105

B.   80

C.   45

D.   25

19.   Given the circle at the right with the indicated center. Find the measure of the angle designated by x.

A.   35

B.   55

C.   70

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D.   72.5

20.   Given the circle at the right with two tangents to the circle from a common external
        point. Find the measure of the angle designated by x.

A.   80

B.   85

C.   130

D.   90

21.   Given: $\overline{AB} \cong \overline{AC}$ in circle O at the right. Which method for proving congruent
        triangles can be used to prove that $\Delta ACO \cong \Delta ABO$?

A.   Side-Side-Side (SSS)

B.   Side-Angle-Side (SAS)

C.   Angle-Side-Angle (ASA)

D.   All of the above.

22.   Given the circle at the right with designated center, designated perpendicular, and radius
        5. Find the length of the segment labeled x.

A.   4

B.   8

C.   12

D.   16

23.   Given: tangent $\overline{AD}$, diameter $\overline{CD}$, secant $\overline{AC}$ in circle O shown at the
        right. Which two sets of congruent angles can be used to prove $\Delta ADC \sim \Delta DBC$?

A. $\angle 1 \cong \angle 6$ and $\angle ADC \cong \angle 4$

B. $\angle 1 \cong \angle 1$ and $\angle ADC \cong \angle 4$

C. $\angle 1 \cong \angle 1$ and $\angle ADC \cong \angle 5$

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D. $\angle 2 \cong \angle 6$ and $\angle ADC \cong \angle 4$

END OF TEST

For Answer Key: www.entrytest.com/testprep/answers.aspx