

Chapter 10 Review

Key Words

For #1 to #6, unscramble the letters. Use the clues to help you.

1. ICBNEIRSD EALNG _____
an angle formed by 2 chords that have a common endpoint (2 words)
2. CTAENRL LANGE _____
an angle created by 2 radii of the circle (2 words)
3. RUIADS _____
a line from the centre to the edge of the circle
4. CRHDO _____
a line segment that has both endpoints on the circle
5. PUDINEECARPRL BOIESTCR _____
a line that divides a line segment in half at 90° to it (2 words)
6. TGNENAT _____
a line that touches a circle at exactly 1 point

10.1 Exploring Angles in a Circle, pages 564–574

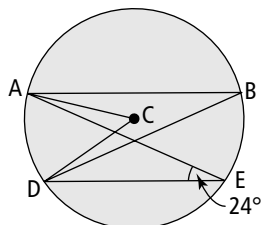
7. Find the measure of each angle.

a) $\angle ABD = \underline{\hspace{2cm}}^\circ$

b) $\angle ACD$

$\angle ACD = 2 \times \underline{\hspace{2cm}}$

$= \underline{\hspace{2cm}}$

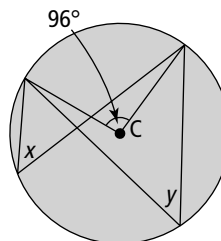


8. What are the measures of angles x and y ?

a) $\angle x = \underline{\hspace{2cm}} \div 2$

$= \underline{\hspace{2cm}}$

b) $\angle y$



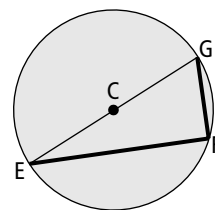
9. What is the measure of $\angle EFG$?

Central angle $\angle ECG$ is a straight angle, so it measures _____ $^\circ$.

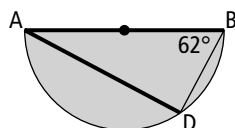
$$\angle EFG = \angle ECG \div \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}} \div \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}}$$



10. What is the measure of $\angle BAD$?



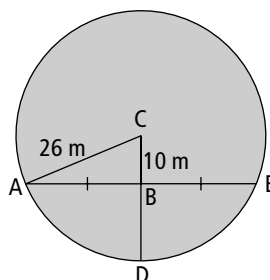
10.2 Exploring Chord Properties, pages 576–583

11. What is the length of chord AE?

$\triangle ABC$ is a right triangle.

$$AB^2 + BC^2 = AC^2$$

$$\boxed{}^2 + \boxed{}^2 = \boxed{}^2$$



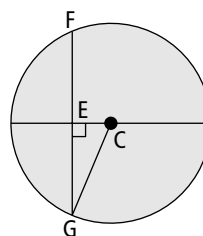
$$AE = AB \times 2$$

$$= \underline{\hspace{2cm}} \times 2$$

$$= \underline{\hspace{2cm}}$$

AE is _____ m.

12. Chord FG measures 18 cm.
The diameter measures 22 cm.
What is the length of EC?



$\triangle CEG$ is a right triangle.

$EG = \underline{\hspace{2cm}}$

radius $CG = \underline{\hspace{2cm}}$

$r = d \div 2$

$EG^2 + EC^2 = CG^2$

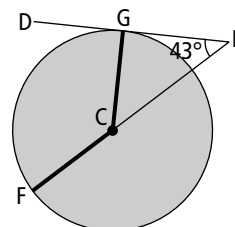
10.3 Tangents to a Circle, pages 585–599

13. What is the measure of $\angle FCG$ if DE is tangent to the circle?

If DE is tangent to the circle, then $\angle EGC$ is $\underline{\hspace{2cm}}^\circ$.

In $\triangle ECG$, $\angle GEC + \angle EGC + \angle ECG = 180^\circ$

$43^\circ + \underline{\hspace{2cm}}^\circ + \angle ECG = 180^\circ$



$\angle ECG + \angle FCG = 180^\circ$, because $\angle FCE$ is a $\underline{\hspace{2cm}}$.

$\underline{\hspace{2cm}}^\circ + \angle FCG = 180^\circ$

The measure of $\angle FCG$ is $\underline{\hspace{2cm}}^\circ$.

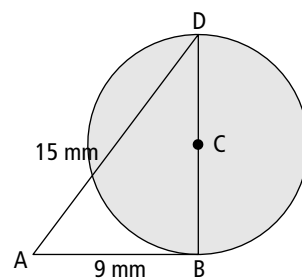
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14. If AB is tangent to the circle at B, what is the length of radius DC?

Find the length of DB using the Pythagorean relationship.

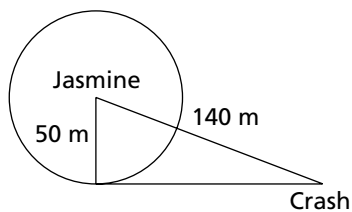
$$AB^2 + DB^2 = AD^2$$



diameter DB = _____ mm

radius DC = _____ mm

15. Jasmine was flying a remote-control airplane when it lost signal at a point tangent to the circle. It flew along this tangent until it crashed. How far did the plane travel before it crashed?



Use the _____ relationship to find the distance.

$$\boxed{}^2 + \boxed{}^2 = \boxed{}^2$$

Sentence: _____