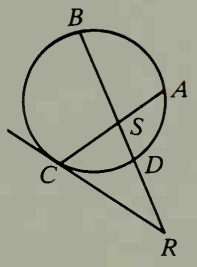
Cumulative Review: Chapters 1–10

Write *always*, *sometimes*, or *never* to complete each statement.

A

1. A quadrilateral ___?___ has four obtuse angles.
2. Two isosceles right triangles with congruent hypotenuses are ___?___ congruent.
3. If $\overset{\frown}{AC}$ on $\odot O$ and $\overset{\frown}{BD}$ on $\odot P$ have the same measure, then $\overset{\frown}{AC}$ is ___?___ congruent to $\overset{\frown}{BD}$.
4. If two consecutive sides of a parallelogram are perpendicular, then the diagonals are ___?___ perpendicular.
5. If the lengths of the sides of two triangles are in proportion, then the corresponding angles are ___?___ congruent.
6. The tangent of an angle is ___?___ greater than 1.
7. A triangle with sides of length $2x$, $3x$, and $4x$, with $x > 0$, is ___?___ acute.
8. Given a plane containing points A and B, the locus of points in the plane that are equidistant from A and B and are 10 cm from A is ___?___ one point.

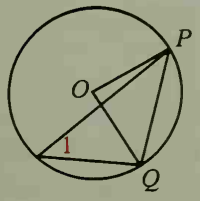
Complete each statement in Exercises 9–12.



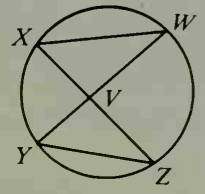
9. If $m\overset{\frown}{AB} = 80$, $m\overset{\frown}{CD} = 66$, and $m\overset{\frown}{DA} = 70$, then $m\angle ASD =$ ___?___.
10. If $BS = 12$, $SD = 6$, and $AS = 8$, then $SC =$ ___?___.
11. If $RD = 9$ and $DB = 16$, then $RC =$ ___?___.
12. If $m\overset{\frown}{AB} = 80$, $m\overset{\frown}{CD} = 66$, and $m\overset{\frown}{DA} = 70$, then $m\angle R =$ ___?___.
13. Draw a large $\triangle MNP$. Construct a $\triangle XYZ$ congruent to $\triangle MNP$.

B

14. Describe the locus of points in space that are 4 cm from plane X and 8 cm from point J.
15. $\triangle DEF$ is a right triangle with hypotenuse $\overline{DF}$. $DE = 6$ and $EF = 8$.
    a. If $\overline{EX} \perp \overline{DF}$ at X, find DX.
    b. If Y lies on $\overline{DF}$ and $\overrightarrow{EY}$ bisects $\angle DEF$, find DY.
16. If each interior angle of a regular polygon has measure 160, how many sides does the polygon have?
17. Given: $\odot O$; $m\angle 1 = 45$
    Prove: $\triangle OPQ$ is a 45°-45°-90° $\triangle$.



18. Use the given diagram to prove that $WX \cdot YV = XV \cdot ZY$.



19. Draw $\overline{AB}$. Construct any rectangle with a diagonal congruent to $\overline{AB}$.