

Cumulative Review: Chapters 1–7

True-False Exercises

Write T or F to indicate your answer.

- A**
- If $AX = XB$, then X must be the midpoint of \overline{AB} .
 - Definitions may be used to justify statements in a proof.
 - If a line and a plane are parallel, then the line is parallel to every line in the plane.
 - When two parallel lines are cut by a transversal, any two angles formed are either congruent or supplementary.
 - If the sides of one triangle are congruent to the corresponding sides of another triangle, then the corresponding angles must also be congruent.
 - Every isosceles trapezoid contains two pairs of congruent angles.
- B**
- If a quadrilateral has two pairs of supplementary angles, then it must be a parallelogram.
 - If the diagonals of a quadrilateral bisect each other and are congruent, then the quadrilateral must be a square.
 - In $\triangle PQR$, $m\angle P = m\angle R = 50$. If T lies on \overline{PR} and $m\angle PQT = 42$, then $PT < TR$.
 - In quad. $WXYZ$, if $WX = XY = 25$, $YZ = 20$, $ZW = 16$, and $WY = 20$, then \overline{WY} divides the quadrilateral into two similar triangles.
 - Two equiangular hexagons are always similar.

Multiple-Choice Exercises

Indicate the best answer by writing the appropriate letter.

- A**
- Which pair of angles must be congruent?
 - $\angle 1$ and $\angle 4$
 - $\angle 2$ and $\angle 3$
 - $\angle 2$ and $\angle 4$
 - $\angle 4$ and $\angle 5$
 - $\angle 2$ and $\angle 8$
 - If a , b , c , and d are coplanar lines such that $a \perp b$, $c \perp d$, and $b \parallel c$, then:
 - $a \perp d$
 - $b \parallel d$
 - $a \parallel d$
 - $a \parallel c$
 - none of these
 - If $\triangle ABC \cong \triangle NDH$, then it is also true that:
 - $\angle B \cong \angle H$
 - $\angle A \cong \angle H$
 - $\overline{AB} \cong \overline{HD}$
 - $\overline{CA} \cong \overline{HN}$
 - $\triangle CBA \cong \triangle DHN$
- B**
- If $PQRS$ is a parallelogram, which of the following *must* be true?
 - $PQ = QR$
 - $PQ = RS$
 - $PR = QS$
 - $\overline{PR} \perp \overline{QS}$
 - $\angle Q \cong \angle R$
 - Which of the following can be the lengths of the sides of a triangle?
 - 3, 7, 10
 - 3, 7, 11
 - 0.5, 7, 7
 - $\frac{1}{2}, \frac{1}{4}, \frac{1}{5}$
 - 1, 3, 5

