

Geometry Review Practice Set 1

Part I: Multiple Choice (5 Questions)

1. Which theorem states that if two parallel lines are cut by a transversal, alternate interior angles are congruent?
A) Vertical Angle Theorem
B) Alternate Interior Angle Theorem
C) Angle Addition Postulate
D) Linear Pair Postulate
2. Which congruence postulate states that if three sides of one triangle are congruent to three sides of another triangle, the triangles are congruent?
A) SAS
B) ASA
C) SSS
D) AAS
3. Which of the following is always true about parallelograms?
A) Opposite sides are perpendicular
B) Diagonals are congruent
C) Opposite sides are parallel and congruent
D) All sides are equal
4. What is the sum of the interior angles of a hexagon?
A) 360°
B) 540°
C) 720°
D) 900°
5. Which triangle theorem states that the sum of the lengths of any two sides must be greater than the third side?
A) Exterior Angle Theorem
B) Isosceles Triangle Theorem
C) Triangle Inequality Theorem
D) Angle Bisector Theorem

Part II: Matching (5 Questions)

Match the term with the correct definition:

1. Vertical Angles
2. Angle Bisector
3. Reflexive Property of Congruence

4. CPCTC

5. Orthocenter

Definitions:

A) If two triangles are congruent, then their corresponding sides and angles are congruent.

B) Angles formed by two intersecting lines; always congruent by VAT.

C) The intersection point of the altitudes of a triangle.

D) A line or ray that splits an angle into two equal parts.

E) A POC that states that a figure is congruent to itself.

Answer Key

Part I: Multiple Choice

1. B - Alternate Interior Angle Theorem
2. C - SSS, Side-Side-Side Congruence Postulate (sometimes noted as a theorem and not a postulate)
3. C - Opposite sides are parallel and congruent
4. C - 720°
5. C - Triangle Inequality Theorem

Part II: Matching

1. B
2. D
3. E
4. A; a generally accepted abbreviation is the CPCTC - short for Corresponding Parts of Congruent Triangles are Congruent
5. C