

Chapter 4: Congruent Triangles

4.1 Congruent Triangles

- 1) congruent triangles
- 2) Classification by sides
 - a. Equilateral triangle
 - b. Isosceles triangle
 - c. Scalene triangle
- 3) Classification by angles
 - a. Acute triangle
 - b. Equiangular triangle
 - c. Right triangle
 - d. Obtuse triangle
- 4) vertex
- 5) opposite side
- 6) adjacent side
- 7) right triangle
 - a. legs
 - b. hypotenuse
- 8) isosceles triangle
 - a. legs
 - b. base
- 9) Thm 4.1: Properties of Congruent Triangles

4.2 Angles of a Triangle

- 1) interior angle
- 2) exterior angle
- 3) Thm 4.2: Triangle Sum Thm
- 4) Thm 4.3: Third Angles Thm
- 5) Thm 4.4
- 6) Thm 4.5: Exterior Angles Thm
- 7) Thm 4.6 Exterior Angles Inequality Thm

4.3 Proving that Triangles are Congruent

- 1) Postulate 17: Side-Side-Side (SSS) Congruence Postulate
- 2) Postulate 18: Side-Angle-Side (SAS) Congruence Postulate

4.4 More Ways to Prove that Triangles are Congruent

- 1) Postulate 19: Angle-Side-Angle (ASA) Congruence Postulate
- 2) Theorem 4.7: Angle-Angle-Side (AAS) Congruence Theorem

4.6 Isosceles and Right Triangles

- 1) base angles
- 2) Thm 4.8: Base Angles Thm
- 3) Thm 4.9
- 4) Corollary to Thm 4.8
- 5) Corollary to Thm 4.9
- 6) Thm 4.10: Hypotenuse-Leg (HL) Congruence Thm

4.5 Using Congruent Triangles

- 1) CPCTC