Quizlet

M2 Unit 4 - Similarity and Congruence

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Alternate Exterior Angles Theorem	Angles that lay outside the parallel lines and are on opposite sides of the transversal; They are congruent.
Alternate Interior Angles Theorem	Angles that lie within a pair of lines and on opposite side of a transversal. They are congruent.
Angle-Angle-Side (AAS) Theorem	If two angles and a non-included side of two triangles are congruent, then the triangles are congruent.
Angle-Angle Similarity (AA~) Postulate	If two angles of one triangle are congruent to two angles of another triangle, then the triangles are similar.
Angle Bisector Theorem	If a point is on the bisector of an angle, then the point is equidistant from the sides of the angle.
Angle-Side-Angle (ASA) Postulate	If two angles and the included side of two triangles are congruent, then the triangles are congruent.
Base Angle of an Isosceles Triangle	One of the two angles that have the base of the triangle as a side.
Base of an Isosceles Triangle	The side opposite the vertex angle.
Bisector	A point, line or line segment that divides a segment or angle into two equal parts.
Center of Dilation	In a dilation, the fixed point about which the figure is enlarged or reduced.
Congruence Transformations	Compositions of rigid motions that take figures to congruent figures.
Congruent	Having exactly the same size and shape.
Congruent Polygons	Polygons that have corresponding sides congruent and corresponding angles congruent.
Converse of the Angle Bisector Theorem	If a point in the interior of an angle is equidistant from the sides of the angle, then the point is on the angle bisector.
Converse of the Isosceles Triangle Theorem	If two angles of a triangle are congruent, then the sides opposite those angles are congruent.
Converse of the Perpendicular Bisector Theorem	If a point is equidistant from the endpoints of a segment, then it is on the perpendicular bisector of the segment.
Corollary	A theorem that can be proved easily using another theorem.
Corollary to Side-Splitter Theorem	If three parallel lines intersect two transversals, then the segments intercepted on the transversals are proportional.
Corollary to the Converse of the Isosceles Triangle Theorem	If a triangle is equiangular, then the triangle is equilateral.
Corollary to the Isosceles Triangle Theorem	If a triangle is equilateral, then the triangle is equiangular.
Corresponding Angles Theorem	If two parallel lines are cut by a transversal, then the pairs of corresponding angles are congruent.
CPCTC	Corresponding parts of congruent triangles are congruent.
Dilation	A transformation that changes the size of an object, but not the shape.
Distance from a Point to a Line	The length of the perpendicular segment from the point to the line.
Enlargement	Dilating a figure so that it is larger (scale factor is greater than 1).
Equiangular Triangle	A triangle with three congruent angles.
Equidistant	The same distance apart at every point.
Equilateral Triangle	A triangle with three congruent sides.
Extended Proportions	Three or more ratios are equal.
Hypotenuse	The side opposite the right angle in a right triangle.
Hypotenuse-Leg (HL) Theorem	In a right triangle, if the hypotenuses and one of the legs of two triangles are congruent, then the triangles are congruent.
Indirect Measure	A method of measurement that uses formulas, similar figures, and/or proportions.
Isosceles Triangle Theorem	If two sides of a triangle are congruent, then the angles opposite those sides are congruent.
Leg of a right triangle	One of the two sides of the right triangle that form the right angle.
Legs of an Isosceles Triangle	The two congruent sides of an isosceles triangle.
Midsegment of a Triangle	A segment connecting the midpoints of two sides of the triangle.
Perpendicular Bisector Theorem	If a point is on the perpendicular bisector of a segment, then it is equidistant from the endpoints of the segment.
Reduction	Dilating a figure so that it is smaller (Scale factor is between 0 and 1).

39. **Same-Side Interior Angles Postulate**	Two angles on one side of a transversal, and on the inside of the two parallel lines being intersected. The two angles are supplementary.
40. **Scale**	The ratio that compares each length in the scale drawing to the actual length.
41. **Scale Drawing**	A drawing that is similar to an actual object, or place. Floor plans, blue prints, and maps are all examples of scale drawings.
42. **Scale Factor**	The ratio of any two corresponding lengths in two similar geometric figures.
43. **Side-Angle-Side (SAS) Postulate**	If two sides and the included angle of two triangles are congruent, then the triangles are congruent.
44. **Side-Angle-Side Similarity (SAS~) Postulate**	If an angle of one triangle is congruent to an angle of a second triangle, and the sides that include the two angles are proportional, then the triangles are similar.
45. **Side-Side-Side Similarity (SSS~) Postulate**	If the corresponding sides of two triangles are proportional, then the triangles are similar.
46. **Side-Side-Side (SSS) Postulate**	If three corresponding sides of two triangles are congruent, then the triangles are congruent.
47. **Side-Splitter Theorem**	If a line is parallel to one side of a triangle and intersects the other two sides, then it divides those sides proportionally.
48. **Similar Figures**	Figures that have the same shape but not necessarily the same size.
49. **Similar Polygons**	Polygons that have the same shape, but not necessarily the same size. Corresponding sides of similar polygons are proportional.
50. **Theorem 22**	If a line bisects the vertex angle of an isosceles triangle, then the line is also the perpendicular bisector of the base.
51. **Triangle-Angle-Bisector Theorem**	If a ray bisects an angle of a triangle, then it divides the opposite side into two segments that are proportional to the other two sides of the triangle.
52. **Triangle Midsegment Theorem**	If a segment joins the midpoints of two sides of a triangle, then the segment is parallel to the third side and is half as long.
53. **Vertex Angle of an Isosceles Triangle**	The angle between the two congruent sides (legs) of an isosceles triangle.