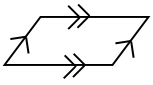
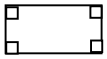
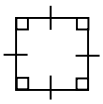
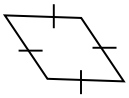
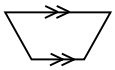
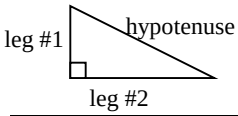
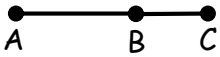
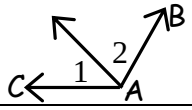
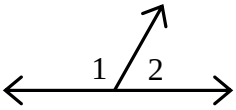
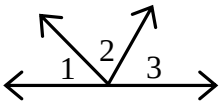
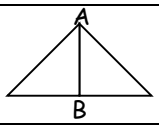
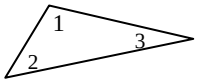
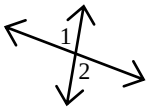
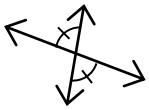
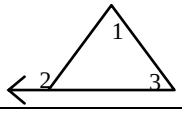
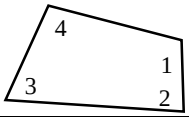
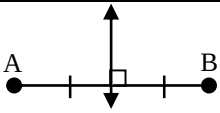
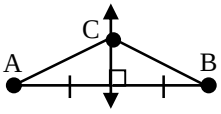
Justifications for Proofs

IF…	THEN	Justification
Parallel (∥)	Lines have the same slope	Definition of Parallel
Perpendicular (⊥)	Lines intersect to form a 90° angle	Definition of Perpendicular
Parallelogram	 Quadrilateral w/ BOTH pairs of opposite sides parallel	Definition of Parallelogram
Rectangle	 Quadrilateral w/ four right angles	Definition of Rectangle
Square	 Quadrilateral w/ four right angles AND all sides equal lengths	Definition of Square
Rhombus	 Quadrilateral w/ all sides equal lengths	Definition of Rhombus
Trapezoid	 Quadrilateral w/ only ONE pair of parallel sides	Definition of Trapezoid
Midpoint	Point that splits a segment into 2 ≅ segments	Definition of Midpoint
Bisect	Cuts an object (angle or segment) into 2 ≅ parts	Definition of Bisect
Isosceles Triangle	 Triangle w/ TWO sides of equal length	Definition of Isosceles
Equilateral	All sides are ≅	Definition of Equilateral
	$(\text{leg\#1})^2 + (\text{leg\#2})^2 = (\text{hypotenuse})^2$	Pythagorean Thm

IF…	THEN	Justification
a = b & b = c	a = c	Substitution Property
	AB + BC = AC	Segment Addition
	m∠1 + m∠2 = m∠BAC	Adjacent ∠ Addition
≅ Δs	≅ parts	Corresponding parts of ≅ Δs are ≅
	m∠1 + m∠2 = 180°	Linear Pair
	m∠1 + m∠2 + m∠3 = 180°	Adjacent ∠s that form a straight ∠
	$\overline{AB} \cong \overline{AB}$	Reflexive Property (Also works for a SHARED ∠)
	m∠1 + m∠2 + m∠3 = 180°	Δ Sum Thm
 	m∠1 = m∠2	Vertical ∠ Thm
	m∠2 = m∠1 + m∠3	Exterior ∠ Thm
	m∠1 + m∠2 + m∠3 + m∠4 = 360°	Sum of the ∠s in a quadrilateral is 360°
 	AC = BC	Points on the perpendicular bisector of a segment are equidistant to the segment's endpoints