Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_\_

Proof Helper

***Statement looks like . . . Reason is . . .***

< 1 and < 2 are alternate interior angles Definition of alternate interior angles

< 1 and < 2 are alternate exterior angles Definition of alternate exterior angles

< 1 and < 2 are same-side interior angles Definition of same-side interior angles

< 1 and < 2 are corresponding angles Definition of corresponding angles

< 1 and < 2 are vertical angles Definition of vertical angles

m < 1 + m < 2 = 90˚ Definition of complementary

m < 1 + m < 2 = 180˚ (not forming a line) Definition of supplementary

m < 1 + m < 2 = 180˚ (forming a line) Definition of linear pair

< 1 and < 2 are supplementary Same-Side Interior Angles Theorem

< 1  < 2 Alternate Interior Angles Theorem

< 1  < 2 Alternate Exterior Angles Theorem

< 1  < 2 Corresponding Angles Postulate

< 1  < 2 Vertical Angles Theorem

If a = b and b = c, then a = c Transitive Property of Equality

If m < 1 = m < 2, then < 1  < 2 Definition of congruent angles

 Addition

 Subtraction

 Substitution