

Properties of Quadrilaterals

Check the theorem that you will be working on:

Ways to Prove that a Quadrilateral is a Parallelogram	
	If both pairs of opposite sides of a quadrilateral are parallel, then it is a parallelogram.
	If both pairs of opposite sides of a quadrilateral are congruent, then it is a parallelogram.
	If one pair of opposite sides of a quadrilateral is both parallel and congruent, then it is a parallelogram.
Ways to Prove that a Parallelogram is a Rectangle	
	If the diagonals of a parallelogram are congruent, then it is a rectangle.
	If one angle of a parallelogram is a right angle, then it is a rectangle.
Ways to Prove that a Parallelogram is a Rhombus	
	If the diagonals of a parallelogram are perpendicular, then it is a rhombus.
	If two consecutive sides of a parallelogram are congruent, then it is a rhombus.

Part A: Prove Your Theorem

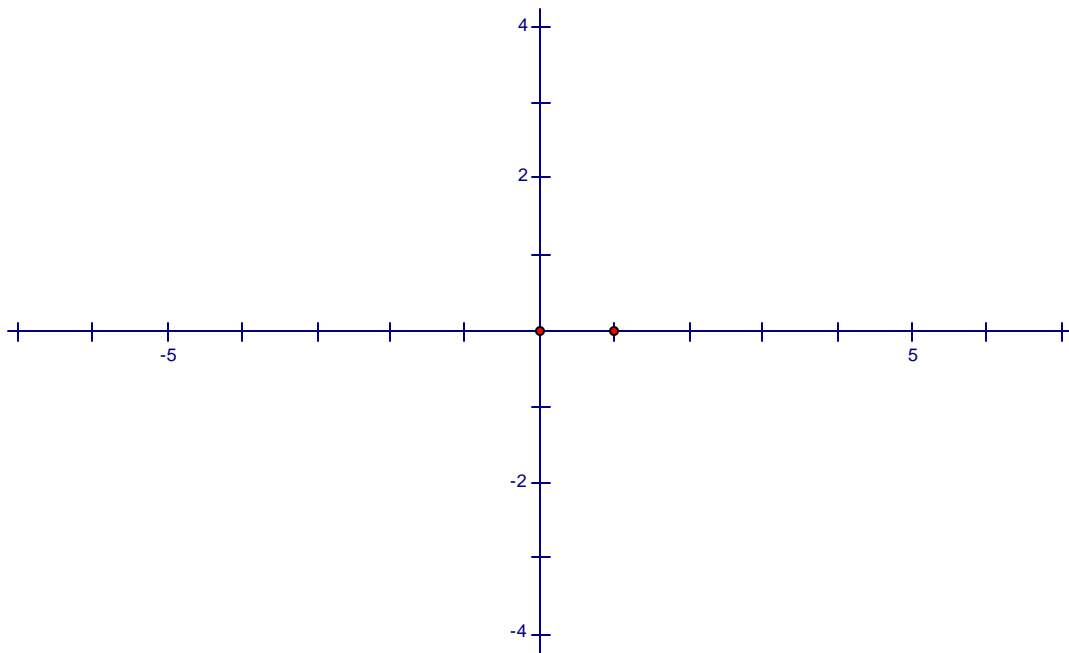
	Statements	Reasons
Diagram:		
Given:		
Prove:		

Part B: Algebra Problem

Problem: _____

Answer:

Part C: Coordinate Problem (You can change the scale, if needed.)



Problem: _____

Answer:

CHALLENGE:

1. Which theorem can you use to show that an equilateral quadrilateral must be a parallelogram?
2. Which theorem above can you use to show that an equiangular quadrilateral must be a parallelogram?
3. Use one of the theorems above to show that any two congruent triangles can be arranged to form a parallelogram.