New Concepts

- Rectangle
- Rhombus
- Square
- Trapezoid
- Isosceles trapezoid
- Kite

Problem Set #29

"Music is the pleasure the human mind experiences from counting without being aware that it is counting."

- Gottfried Leibniz

New Postulates and Theorems

Problems:

29-1 The "What If…?" Game

Think about the 6 specific types of quadrilaterals that we have covered:
Parallelograms, Squares, Rhombi, Rectangles, and Trapezoids and Kites.
Given a piece of information, can you say anything more specific about the type of quadrilateral that it must be? Instead of trying to list what it must be, it may be helpful to describe what it cannot be.

a. What if a quadrilateral has one pair of opposite angles that are congruent?

b. What if a quadrilateral has one pair of opposite angles that are supplementary?

c. What if a quadrilateral has one pair of consecutive angles that are congruent?

d. What if a quadrilateral has one pair of consecutive angles that are supplementary?

g. What if a quadrilateral has three angles that are congruent?

h. What if a quadrilateral has three angles that sum to 180°?

i. What if a quadrilateral has one pair of opposite sides that are congruent?

j. What if a quadrilateral has one pair of opposite sides that are parallel?

k. What if a quadrilateral has one pair of consecutive sides that are congruent?

l. What if a quadrilateral has consecutive sides that are parallel?

m. What if a quadrilateral has three sides that are congruent?

n. What if a quadrilateral has diagonals that are congruent?

o. What if a quadrilateral has one diagonal that bisects the other?

p. What if a quadrilateral has diagonals that bisect each other?

q. What if a quadrilateral has diagonals that are perpendicular?