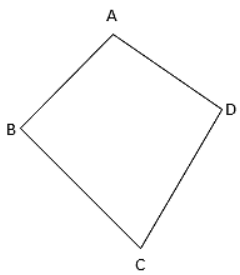
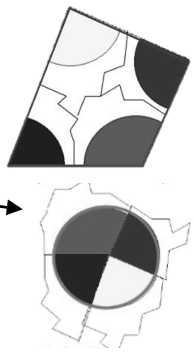
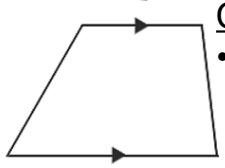
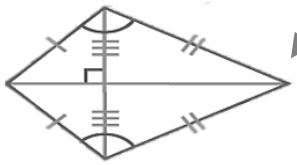
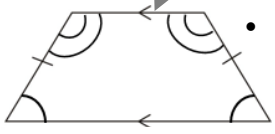
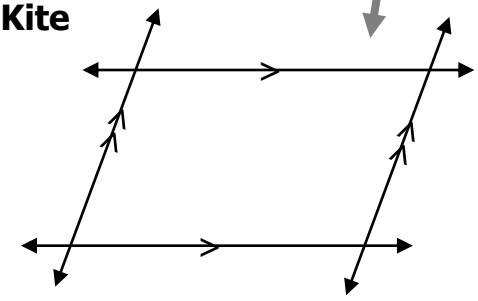
Topic: Types and Properties of Quadrilaterals **Date**: _____

Learning Objective(s):

_____

Main Ideas/ Questions	**Notes**
Quadrilateral Vocabulary	**Quadrilateral** – A _____-sided polygon **Vertex (Vertices)** – The point that connects _____ sides **Adjacent side** – Two sides that share a common _____ **Opposite side** – The side opposite a specified _____ **Opposite angle** – The angle opposite a specified _____
Quadrilateral Angle Characteristics	******Name** a quadrilateral by using a quadrilateral symbol (□) and each vertex's letter AROUND the quadrilateral.***  **Quadrilateral Sum Theorem** 4 Interior Angles = _____  **Potential Names**:
Main Types of Quadrilaterals	 **Quadrilateral** Characteristics: • ___ sides Characteristics: • Adjacent sides are _____ • 1 pair of opposite angles are _____ • Diagonals are _____  **Trapezoid** Characteristics: • 1 pair of opposite sides are _____  **Kite**  **Isosceles Trapezoid** Additional Characteristics: • 1 pair of opposite sides are _____ • Diagonals are _____ • 2 pairs of _____ angles  **Parallelogram**

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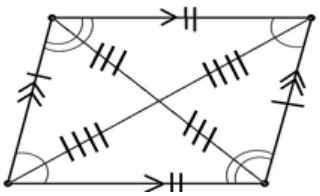
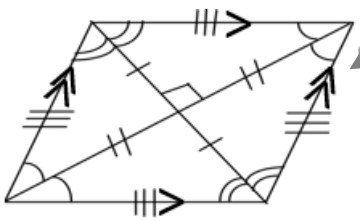
Main Ideas/ Questions
Types of Parallelograms

Notes



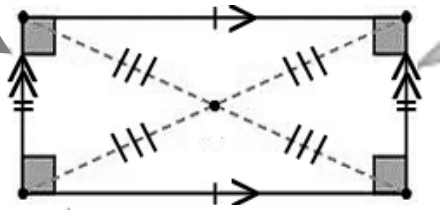
Parallelogram

Characteristics:
- Opposite sides are _____ AND _____
- Opposite angles are _____
- Consecutive angles are _____
- Diagonals _____ each other



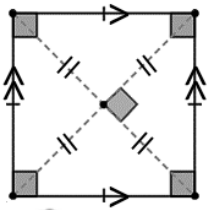
Rhombus

Additional Characteristics:
- ALL sides are _____
- Diagonals
  - ✓ Are _____
  - ✓ **BISECT** _____



Rectangle

Additional Characteristics:
- ALL corner angles are _____
- Diagonals are _____



Square

Examples

Label each statement as ALWAYS, SOMETIMES, or NEVER true.

1. A square is a rectangle.

2. A rectangle is a square.

3. A parallelogram have opposite sides that are not congruent.

4. A trapezoid has opposite sides are parallel.

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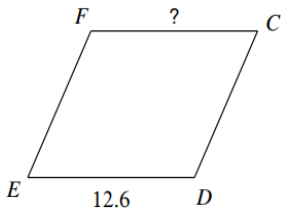
Main Ideas/ Questions

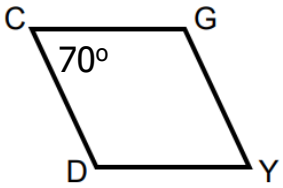
Examples

Notes

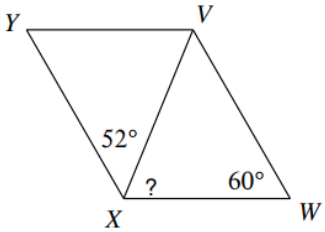
5. ▱CDEF is a parallelogram. What is the length of FC?



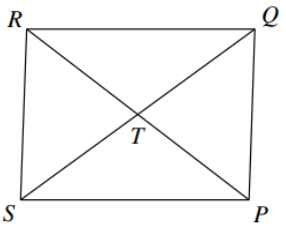
6. ▱CDYG is a parallelogram. Find the rest of the angles.



7. ▱VWXY is a parallelogram. What are the rest of the angle measures?



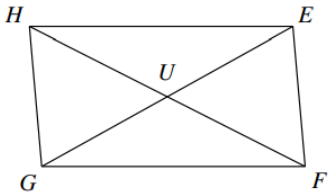
8. ▱RQPS is a square. If ST = 4, what is the length of side SP?



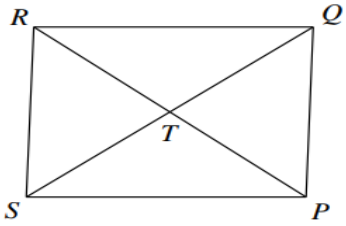
9. ▱EFGH is a parallelogram Solve for x.

$UH = 19$

$FH = 5x - 7$



10. ▱QRSP is a rectangle. If RQ = 8 and TQ = 6, what is the length of RS?



Summary

Summarize the lesson in your own words with the help of the guided questions.

What are the main characteristics about quadrilaterals? What are the three main branches of quadrilaterals? What are the unique characteristics about each type of parallelogram? How can you use the characteristics of quadrilaterals to solve algebraic problems?