

Chapter 6 Test-Quadrilaterals

6.1

- Definitions:
 - **Quadrilateral**- a four sided figure.
 - **Trapezoid**-A quadrilateral with exactly one pair of parallel sides.
 - **Isosceles trapezoid**-A trapezoid with nonparallel opposite sides that are congruent.
 - **Parallelogram**-A quadrilateral with both pairs of opposite sides parallel.
 - **Rectangle**- Parallelogram with 4 right angles.
 - **Rhombus**- Parallelogram with 4 congruent sides.
 - **Square**- Parallelogram with 4 right angles and 4 congruent sides.
 - **Kite**- a quadrilateral with two pairs of adjacent sides that are congruent and no opposite sides congruent.
- Determine the most precise name of the quadrilateral
 - $Slope = \frac{y_2 - y_1}{x_2 - x_1}$ **AND** $Distance = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$
 - Sketch out the figure
 - Determine the slope of the top and bottom and compare.
 - Determine the slope of the left and right and compare.
 - Compare slopes of the two sides. Are they perpendicular?
 - Pick two adjacent sides and determine the distances.

6.2

- Opposite sides of parallelogram are congruent.
- Consecutive angles of a parallelogram are supplementary and opposite angles are congruent.
- Diagonals of a parallelogram bisect each other.
- If three or more parallel lines cut off congruent segments on one transversal, then they cut off congruent segments on every transversal.

6.3

- **5 ways to prove that a quadrilateral is a parallelogram**
 - Both pairs of opposite angles are congruent
 - Both pairs of opposite sides are congruent
 - Both pairs of opposite sides are parallel (By definition)
 - Diagonals bisect each other
 - One pair of opposite sides are both parallel and congruent

6.4

- Each diagonal of a rhombus bisects two angles of the rhombus
- The diagonals of a rhombus are perpendicular
- The diagonals of a rectangle are congruent

6.5

- Parts of a Trapezoid

- Bases- The parallel sides of a trapezoid.
- Base angles- two angles that share a base.
- Legs- the nonparallel sides of a trapezoid.
- The base angles of a trapezoid are congruent
- The diagonals of a trapezoid are congruent
- Trapezoid Midsegment Theorem(From Section 7)
 - The midsegment of a trapezoid is parallel to the bases.
 - The length of the midsegment of a trapezoid is half the sum of the lengths of the bases.
- The diagonals of a kite are perpendicular.

Practice Problems

Checkpoint Quiz #1-Page 327 #1-10 all

Checkpoint Quiz #2- Page 347 #1-8 all

Chapter Review- Page 357-359 #1-29 all

Chapter Test- Page 360 #1-3, 5, 6, 8-15, 17-19, 22

Extra Practice- Page 726-727 #1-8, 11-14, 17-26