SECTION 7.5: PROPERTIES OF TRAPEZIIDS AND KITES

Learning Targets:

7g. Understanding of how to find side and angle measures for trapezoids and kites.
7h. Understanding of how to write and solve equations for angles and sides of trapezoids and kites.

Trapezoid

A quadrilateral with exactly one pair of ____________________________

Isosceles Trapezoid

A trapezoid with ____________________ legs

Examples: Find the missing angles

a.  

b.  

Rules

1. Base angles are ____________
2. Diagonals are ____________
Examples: Determine if the trapezoid is isosceles.

a. O(0, 0) R(0, 3) S(2, 4) T(4, 2)  
b. A(-2, -1) B(0, 3) C(3, 2) D(4, -3)

Midsegment of a Trapezoid

A midsegment of a trapezoid is made by connecting the ________________ of the legs.

The length of the midsegment is __________ the ________ of the bases.

Examples: Solve for x.

a.  
b.  

x + 9

2x + 5

x + 35
Examples: Find the length of the midsegment.

a. \( P(-3, -1) \) \( Q(-1, 3) \) \( R(5, -3) \) \( S(-1, -3) \)

Kites

A quadrilateral with 2 pairs of consecutive _______ are ________

Rules

1. Diagonals are ________
2. 1 pair of opposite angles are ____

Examples: Find the missing angles

a.