GEOMETRY Date _____

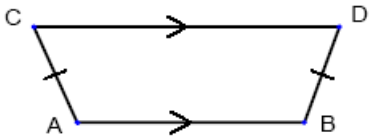
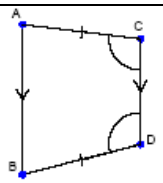
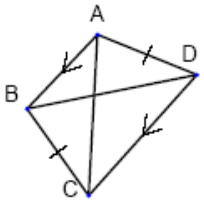
6.6 Trapezoids

G.QP.2 Prove that given quadrilaterals are parallelograms, rhombuses, rectangles, squares, or trapezoids. Include coordinate proofs in the coordinate plane.

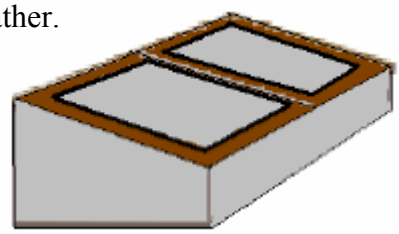
Trapezoid → _____

Diagram: Example:

*_____ trapezoids → non-parallel sides are ≅

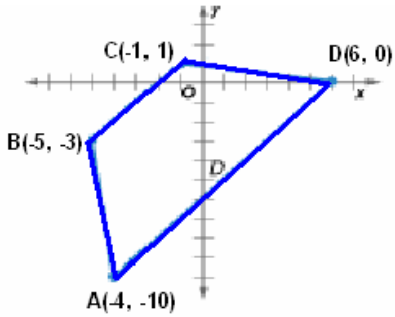
Theorems → ISOSCELES Trapezoids	Examples
If a trapezoid is _____, then each pair of base angles are congruent.	
If a trapezoid has one pair of _____ base angles, then it is an _____ trapezoid.	
A trapezoid is _____ if and only if its _____ are congruent.	

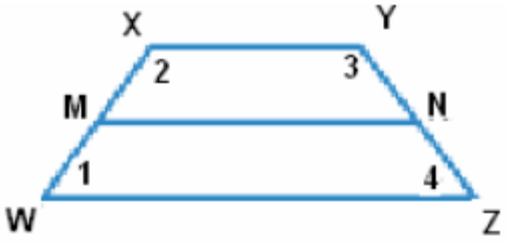
Ex 1:
A cold frame is placed over plants on the ground to protect them during cold weather. The top of the frame is glass to allow the sunlight in and to hold the heat. The cover slants downward to the south to let in as much sunlight as possible. Identify the shape of each quadrilateral used to construct the cold frame shown.



Ex 2:
ABCD is a quadrilateral with vertices $A(-4,-10), B(-5,-3), C(-1,1)$, and $D(6,0)$

a. Verify that *ABCD* is a trapezoid.



b. Determine whether *ABCD* is an **isosceles** trapezoid.

Ex 3:
WXYZ is an **isosceles** trapezoid.
Find $m\angle 1, m\angle 2, m\angle 3$, and $m\angle 4$,
if $m\angle 1 = 15x - 5$ and $m\angle 2 = 90 + 4x$.