6.5 Trapezoids

Goal: To be able to use properties of trapezoids

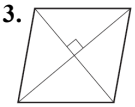
Warm Up

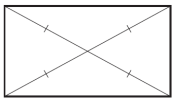
Find the coordinates of the midpoint of $\overline{AB}$.

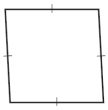
1. $A(3, -5), B(-7, -1)$

2. **Solve for *y*.** $25 = \frac{1}{2}(16 + y)$

Use the information in the diagram to name the special quadrilateral.

3. 

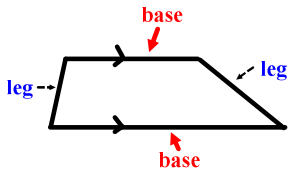
4. 

5. 

Dec 9-8:43 PM

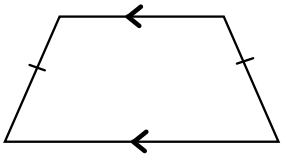
A **trapezoid** is a quadrilateral with exactly one pair of parallel sides. The parallel sides are called the **bases**. The nonparallel sides are called the **legs**.

A trapezoid has two pairs of **base angles**.



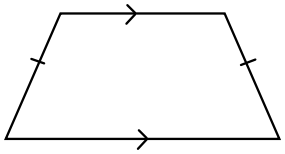
Jan 14-9:09 PM

If the legs of a trapezoid are congruent, then the trapezoid is an **isosceles trapezoid**.

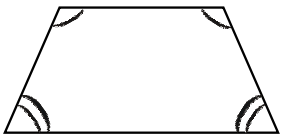


Jan 14-9:15 PM

If a trapezoid is isosceles, then each pair of base angles is congruent.



If a trapezoid has a pair of congruent base angles, then it is isosceles.



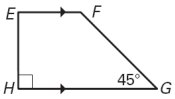
Jan 14-9:17 PM

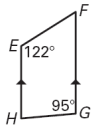
Find Angle Measures of Trapezoids

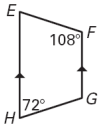
ABCD is a trapezoid.
Find the missing angle measures.

Jan 14-9:28 PM

***EFGH* is a trapezoid. Find the missing angle measures.**

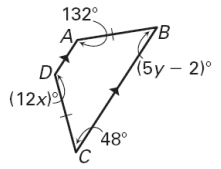
1. 

2. 

3. 

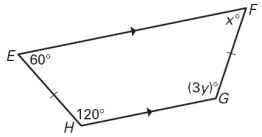
Jan 14-9:28 PM

ABCD is an isosceles trapezoid. Find the values of x and y.

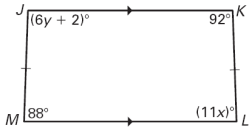


Find the values of the variables.

4. isosceles trapezoid *EFGH*



5. isosceles trapezoid *JKLM*

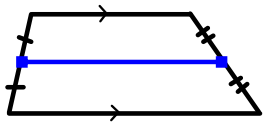


Jan 14-9:31 PM

The midsegment of a trapezoid is the segment that connects the midpoints of its *legs*.

**** The midsegment of a trapezoid is parallel to the bases**

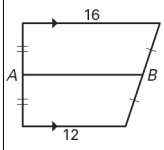
****The length of a midsegment of a trapezoid:1/2 the sum of the bases**



Jan 14-9:28 PM

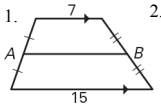
Midsegment of a Trapezoid

Find the length of the midsegment $\overline{AB}$ of trapezoid *JKLM*.

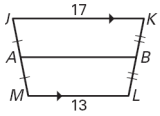


Find the length of the midsegment $\overline{AB}$ of the trapezoid.

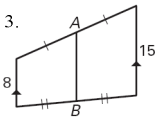
1.



2.



3.



Jan 16-8:02 AM