TOPIC 10-4: TRAPEZOIDS

A trapezoid is another special quadrilateral. Draw a picture of three different trapezoids below…..

Property of a Trapezoid: **A trapezoid has exactly one pair of opposite sides that are parallel and those parallel sides are called the bases. (The two sides that are not parallel are the legs.)**
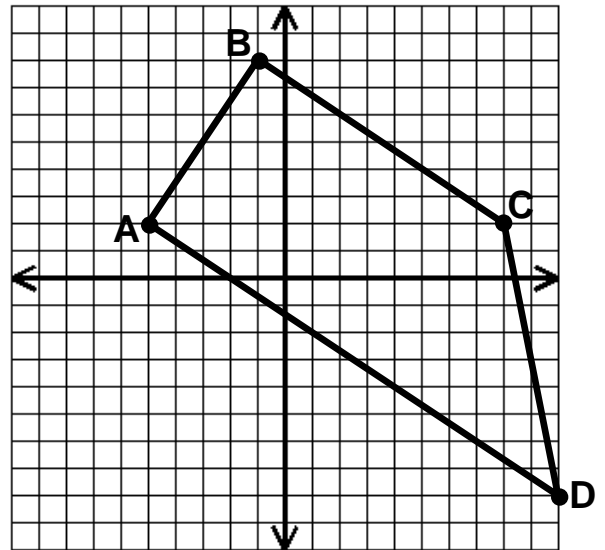
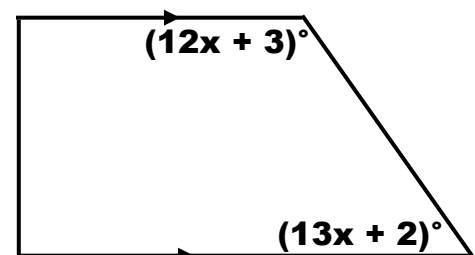**Use trapezoid ABCD to answer the following.**

a) **Name the bases:**

   _____

b) **Name the legs:**

   _____

c) **∠A and ∠D are called:** _____

Find the value of 'x' for the trapezoid.

$(12x + 3)°$

$(13x + 2)°$

The MIDSEGMENT of a trapezoid connects the two midpoints of the non-parallel sides.
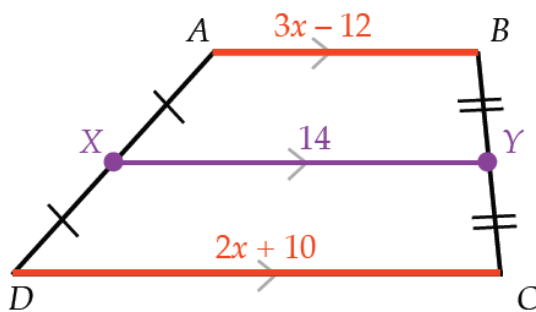To find the length of the midsegment, use the following formula:

MIDSEGMENT = _____

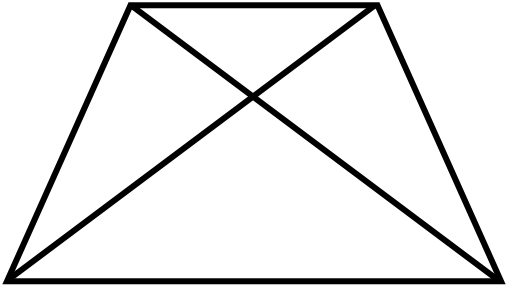(Pause videos after the first example and have students work this problem – then check answer with video.)

Trapezoid Midsegment Theorem

1) The midsegment of the trapezoid is parallel to the bases

2) The measure of the midsegment is equal to one-half the sum of the measures of the bases.
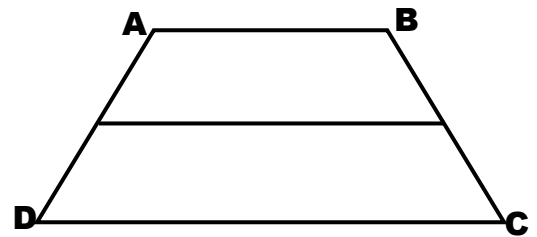
ISOSCELES TRAPEZOID

An ISOSCELES trapezoid has all the properties of a trapezoid plus a few more.

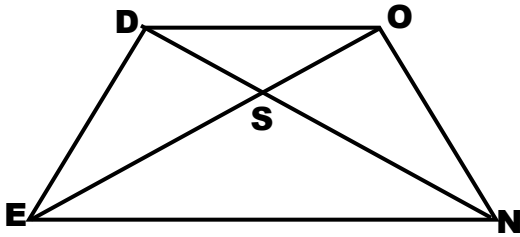| Property:	Picture:
1. Exactly one pair _____ sides.	
2. Legs are _____.	
3. Diagonals are _____.	
4. Base angles are _____.	

ABCD is an isosceles trapezoid. Find the measures of the angles indicated.

a) m∠ADC = 54°;
     m∠BCD = _____

b) m∠BAD = 112°;
      m∠BCD = _____

**DONE is an isosceles trapezoid. m∠EDO = 110° and
m∠DEN = (15x – 5)°. Find the value of 'x'.**

**TRAP is an isosceles trapezoid. PR = 3x – 7 and
TA = 20. Find the value of 'x'.**