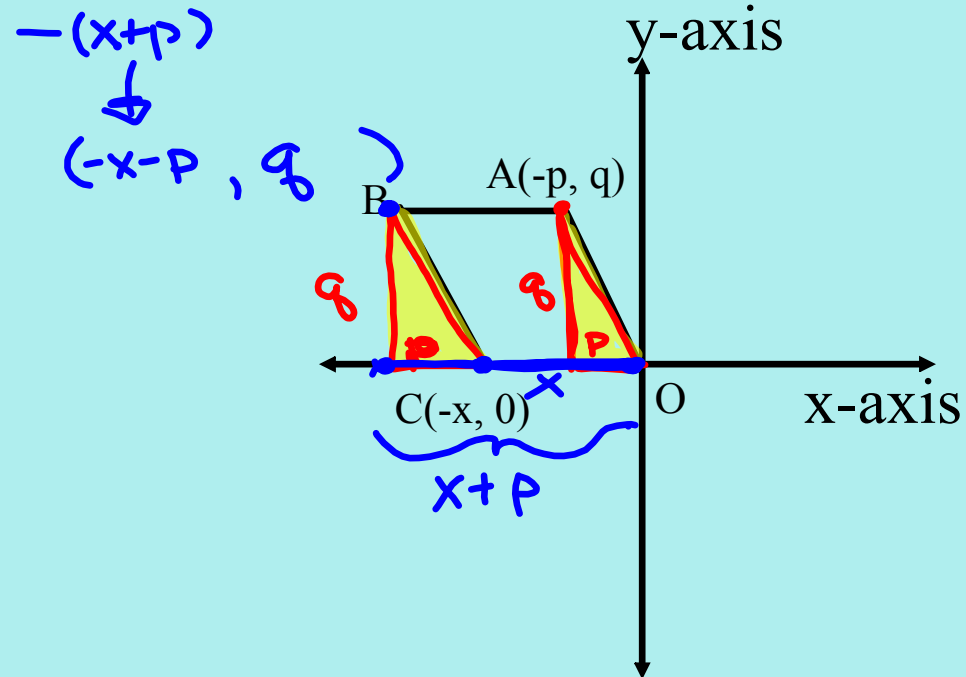


# Geometry

## Ch. 6 Handout 6.6 and 6.7

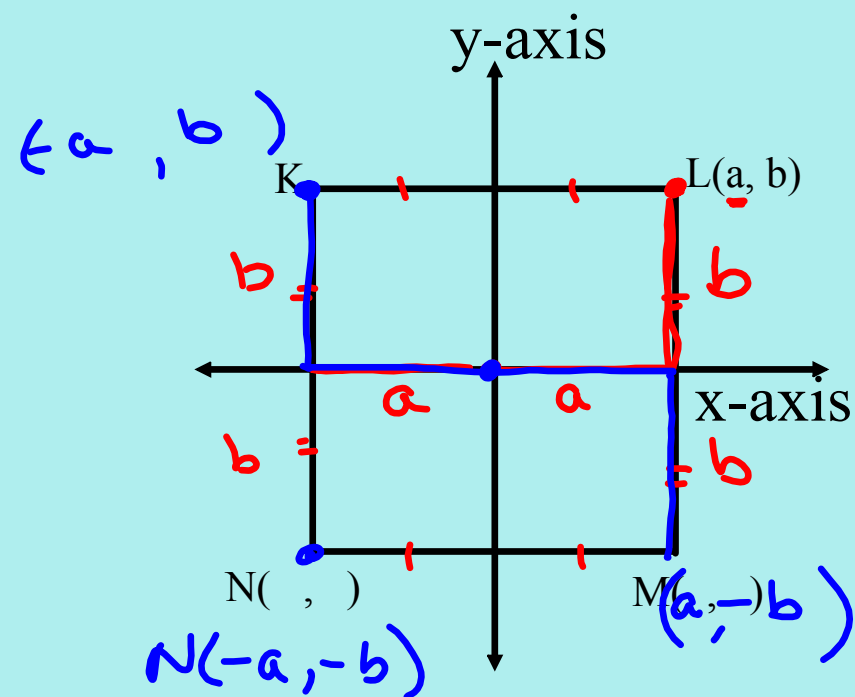
### Placing Figures in the Coordinate Plane

2. Use the properties of parallelogram OCB $\Delta$  to find the missing coordinates.  
Do not use any new variables.

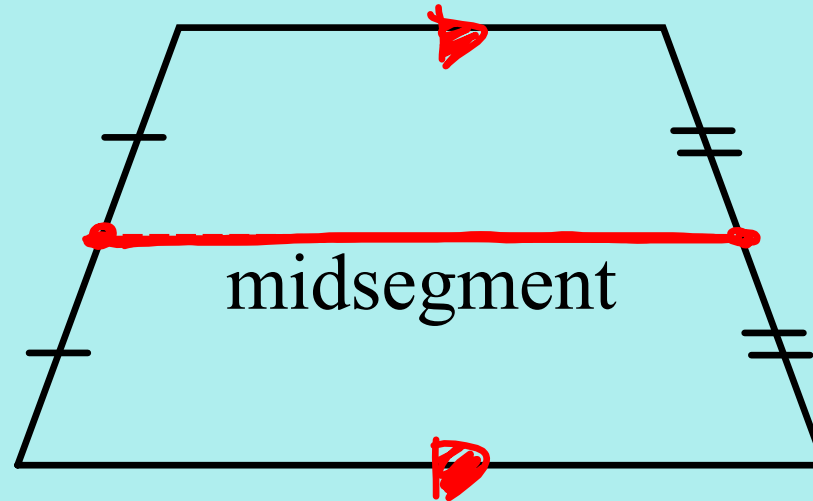


3. Use the properties of square KLMN to find the missing coordinates.

Do not use any new variables



The midsegment of a trapezoid is the segment that joins the midpoints of the nonparallel opposite sides

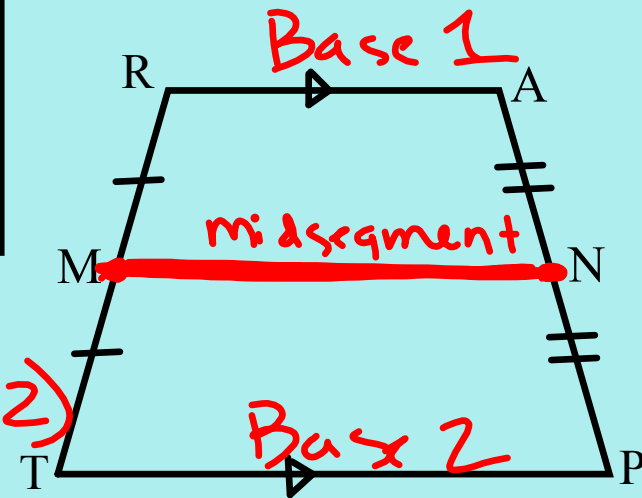


**Theorem 5.18 Trapezoid Midsegment Theorem**

- (1) The midsegment of a trapezoid is parallel to the bases.
- (2) The length of the midsegment of a trapezoid is half the sum of the lengths of the bases.

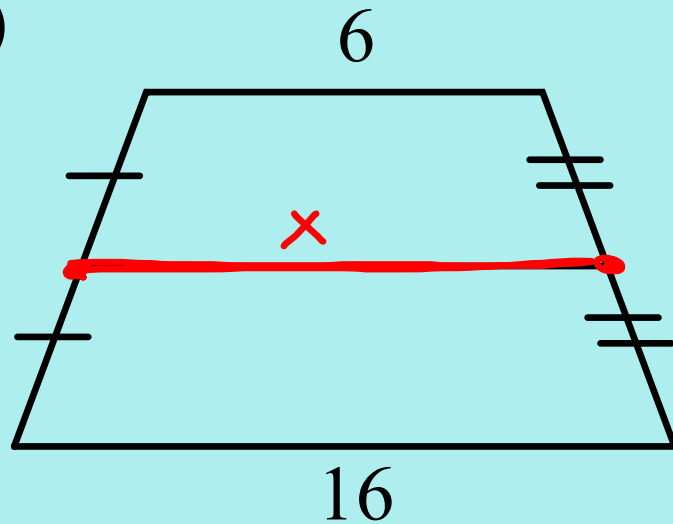
$$\overline{MN} \parallel \overline{TP} \parallel \overline{RA} \text{ and } MN = \frac{1}{2}(TP + RA)$$

$$MN = \frac{1}{2} (\text{base 1} + \text{base 2})$$



1. Find the length of the medsegment of each trapezoid.

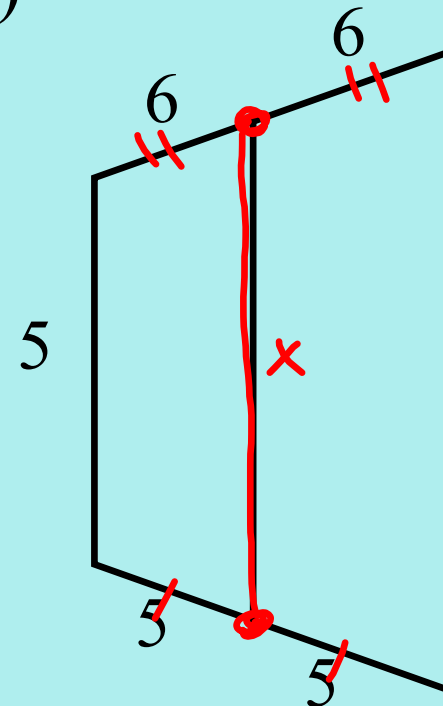
a)



$$x = \frac{1}{2}(6 + 16)$$

$$x = \frac{1}{2}(22) \quad \boxed{x = 11}$$

b)

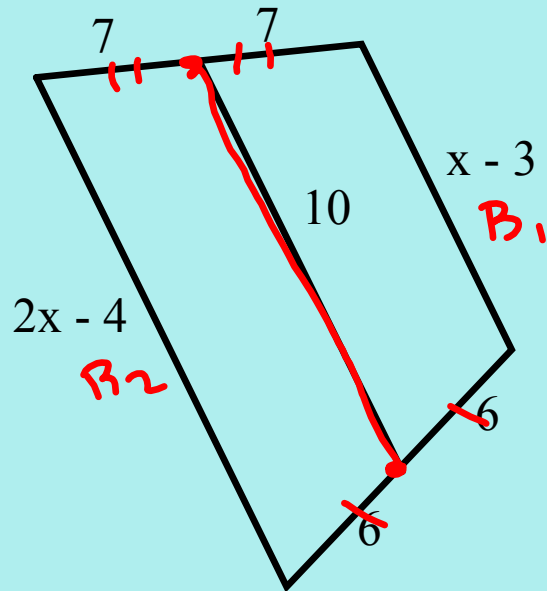


$$x = \frac{1}{2}(5 + 10)$$

$$x = \frac{1}{2}(15)$$

$$\boxed{x = 7.5}$$

2. A trapezoid and its midsegment are shown.  
Find the value of  $x$ .



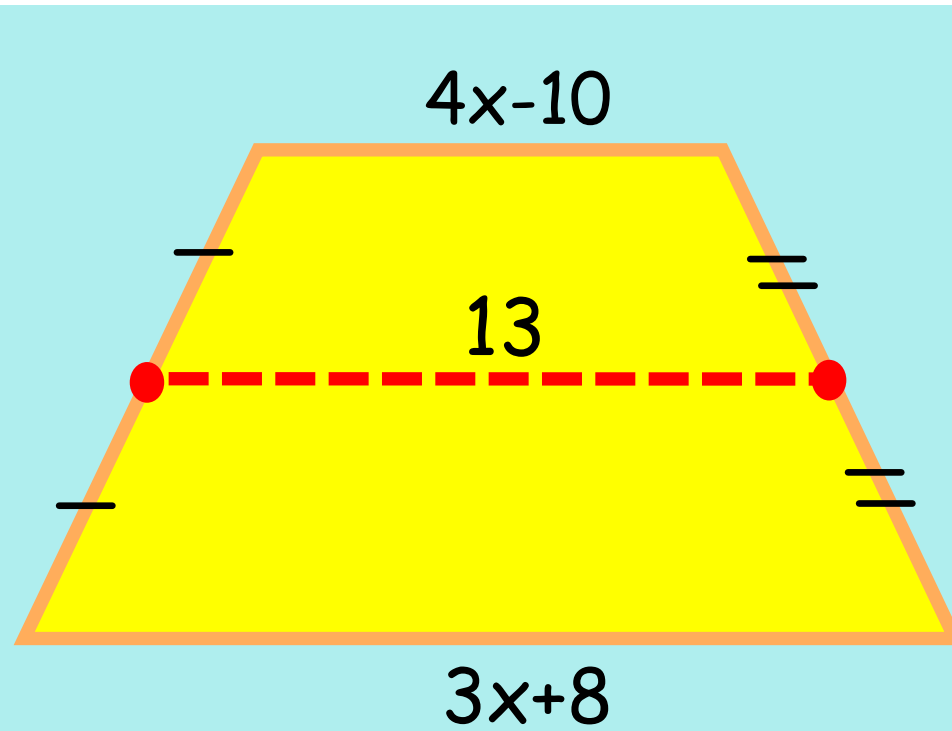
$$2 \cdot 10 = \frac{1}{2} (\underline{x-3} + \underline{2x-4})$$

$$20 = 3x - 7$$

$$+7 \quad +7$$

$$27 = 3x$$

$$a = x$$



Find a value for  $x$ ?