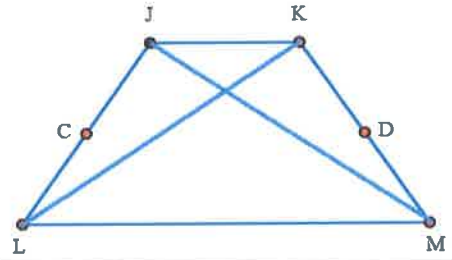
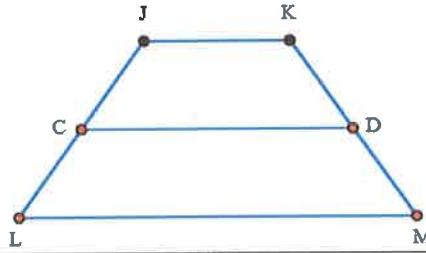
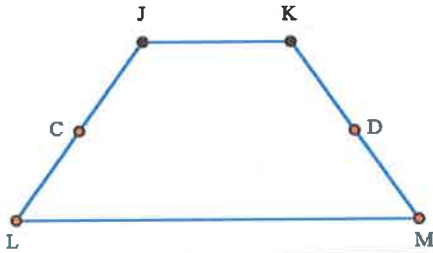


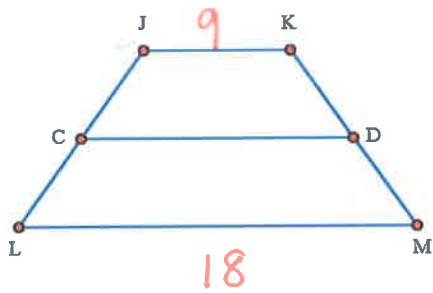
# PROPERTIES OF ISOSCELES TRAPEZOIDS NOTES

## Properties of Isosceles Trapezoids

- One pair of opposite sides are congruent (legs).
- Base angles are congruent.
- Two pairs of consecutive angles are supplementary.
- Diagonals are congruent.
- Diagonals form one pair of congruent triangles.
- Median =  $0.5(\text{Base}_1 + \text{Base}_2)$



1. Find DC if  $JK = 9$  and  $LM = 18$ .

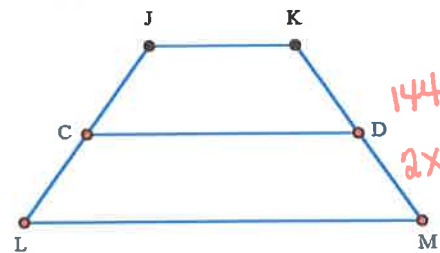


$$DC = \frac{1}{2}(9 + 18)$$

$$= \frac{1}{2}(27)$$

$$DC = 13.5$$

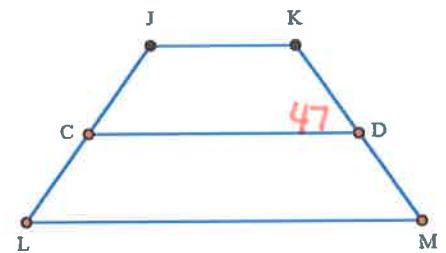
2. What is the value of  $x$  if  $KM = 144$  and  $DM = 2x$ ?



$$2x = 72$$

$$x = 36$$

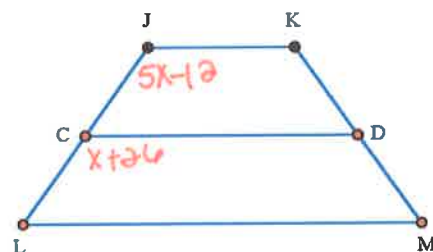
3. Find  $\angle JKD$  if  $\angle KDC = 47$ .



$$180 - 47 = 133$$

$$m\angle JKD = 133$$

4. What is the value of  $x$  if  $\angle J = 5x - 12$  and  $\angle DCL = x + 26$ ?

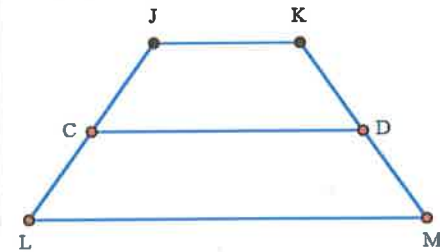


$$5x - 12 = x + 26$$

$$4x = 38$$

$$x = 9.5$$

5. What is the value of  $x$  if  $JK = 2x - 4$ ,  $LM = 4x + 8$ , and  $CD = 53$ ?



$$\frac{1}{2}(2x - 4 + 4x + 8) = 53$$

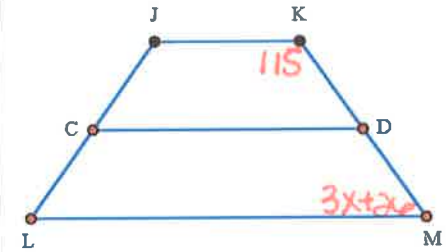
$$\frac{1}{2}(6x + 4) = 53$$

$$3x + 2 = 53$$

$$3x = 51$$

$$x = 17$$

6. What is the value of  $x$  if  $\angle K = 115$  and  $\angle M = 3x + 26$ ?



$$115 + 3x + 26 = 180$$

$$3x = 39$$

$$x = 13$$