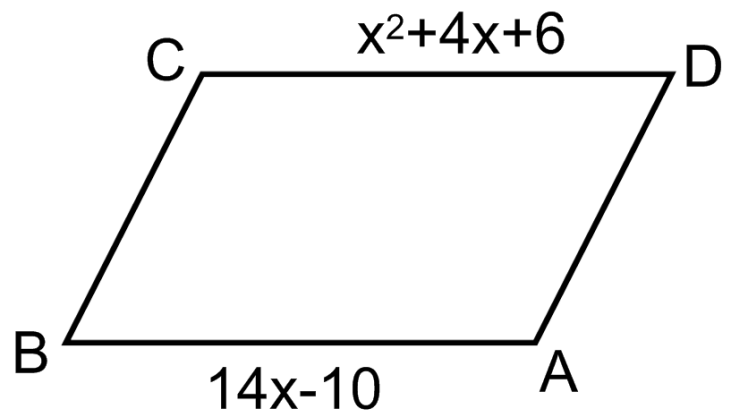
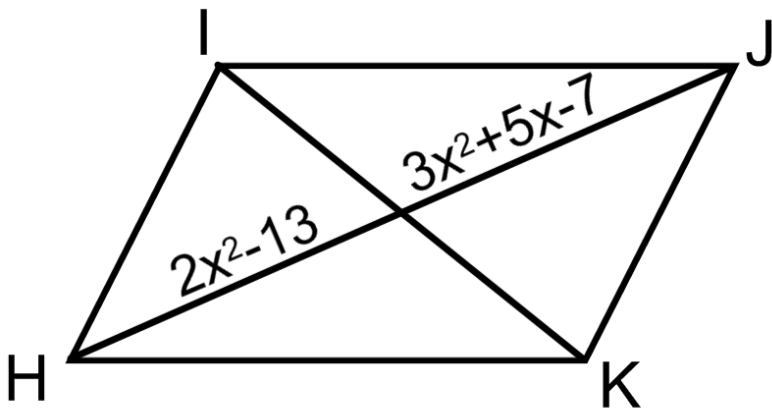
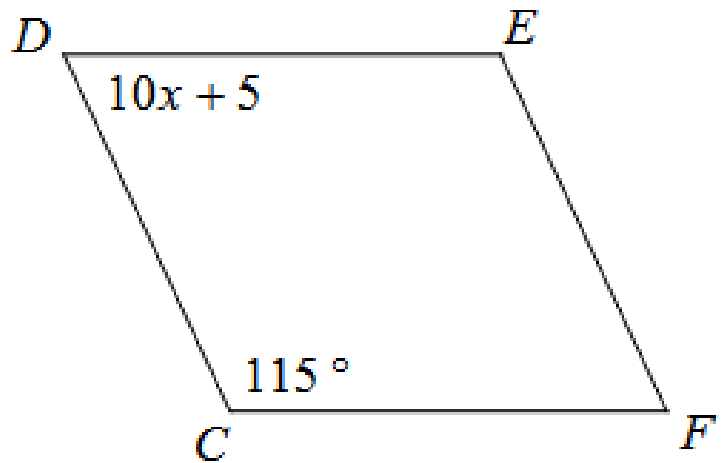
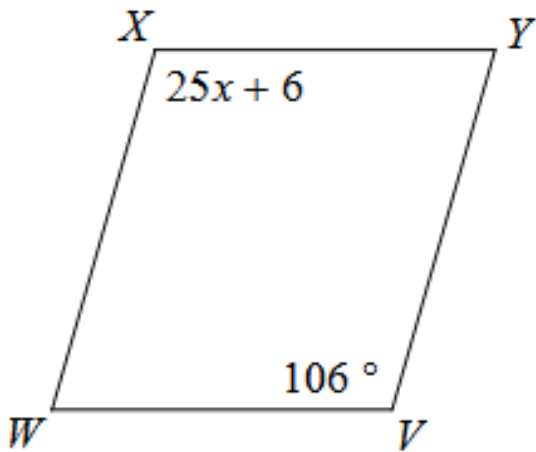


# STATION 3

Each of the following are parallelograms. Find the value of the  $x$  in each figure.

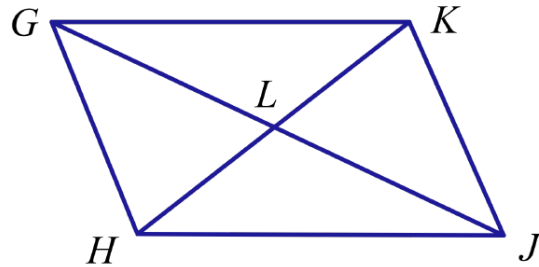


# STATION 4

Prove the following using the properties of parallelograms.

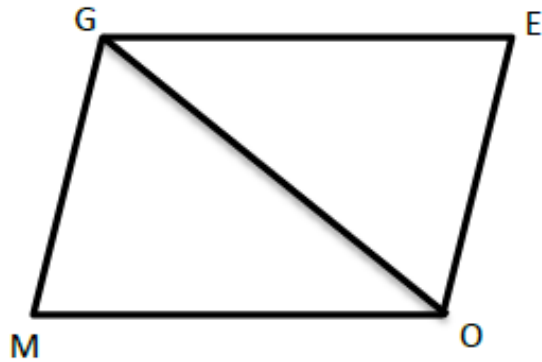
**Given:** Parallelogram GHJK

**Prove:**  $\triangle GLH \cong \triangle JLK$



**Given:**  GEOM

**Prove:**  $\triangle GEO \cong \triangle OMG$



# STATION 2

Draw a picture of each quadrilateral, to determine if it is a parallelogram by one of the following reasons. Be able to explain your selection.

- a) Opposite sides congruent.
- b) Opposite angles congruent.
- c) Diagonals bisect each other.
- d) One pair of opposite sides is both parallel and congruent.
- e) Both pairs of opposite sides are parallel.

21) In quadrilateral BLOT,  $\overline{BL} \parallel \overline{TO}$ ,  $m\angle BTO = 80^\circ$ , and  $m\angle LOT = 100^\circ$ .

22) In quadrilateral JOKE,  $\overline{JO} \cong \overline{EK}$ ,  $m\angle OJE = 65^\circ$ , and  $m\angle JEK = 115^\circ$ .

23) In quadrilateral SLOW,  $\overline{SL} \cong \overline{LO} \cong \overline{OW} \cong \overline{SW}$ .

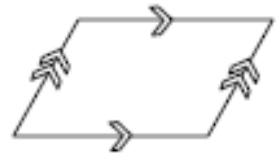
24) In quadrilateral MOAT,  $\overline{MA}$  intersects  $\overline{OT}$  at R,  $\overline{MR} \cong \overline{RA}$ , and  $\overline{TR} \cong \overline{OR}$ .

25) In quadrilateral CRAB,  $m\angle RCB = 60^\circ$ ,  $m\angle CBA = 120^\circ$ , and  $m\angle CRA = 120^\circ$ .

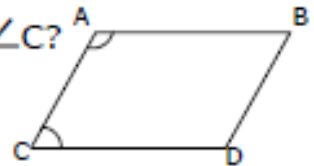
# STATION 1

Complete all the problems. Make sure to draw pictures to help you solve the problems.

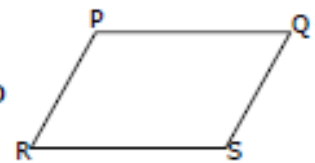
1. Find if both pairs of opposite sides are parallel in this parallelogram?



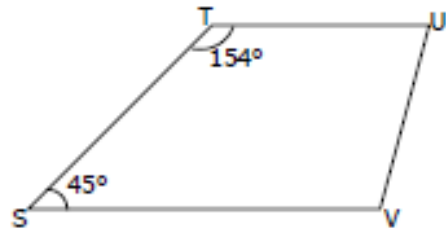
2.  $\square ABCD$  is a parallelogram. Find the sum of  $\angle A$  and  $\angle C$ ?



3.  $\square PQRS$  is a parallelogram. If angle  $\angle P$  and  $\angle R$  are supplementary angle, then find if  $\angle Q$  is supplementary to  $\angle P$  and  $\angle R$  both?

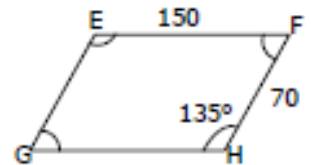


4. Is STUV a parallelogram?



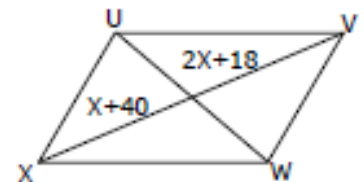
5. Is  $\angle S$  and  $\angle T$  are supplementary angles?

6. What is the length of side EG and side GH in parallelogram EFGH?



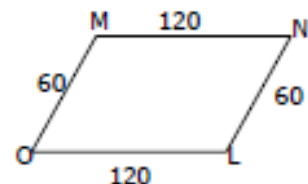
7. What is the measure of E,F,G in parallelogram?

8.  $\square UVWX$  is a parallelogram. What is the value of x?

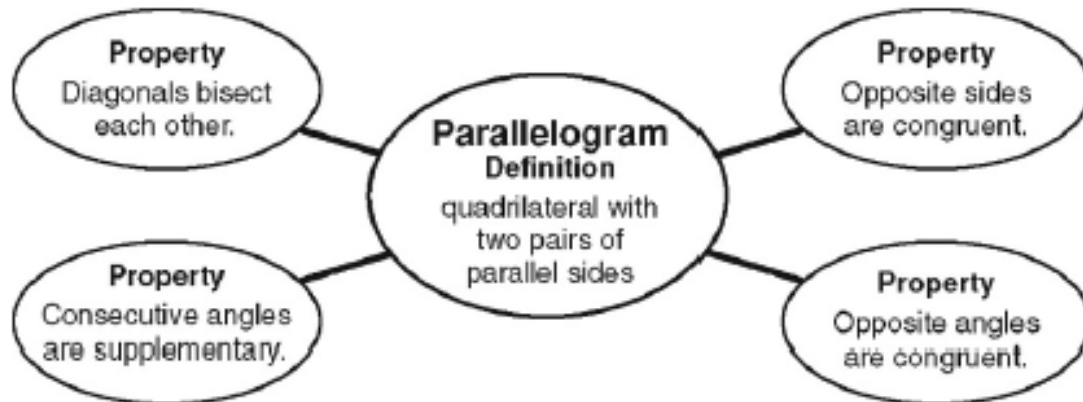


9. If the diagonals of a parallelogram ABCD bisect each other then  $\overline{AO} = \overline{OD}$ ,  $\overline{CO} = \overline{OB}$ ?

10. Is  $\square MNLO$  a parallelogram?

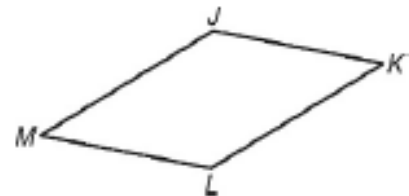


# STATION 5



Use the graphic aid above to help answer Problems 1–10.

In  $\square JKLM$ ,  $LM = 86$  millimeters,  $LK = 100$  millimeters, and  $m\angle JML = 42^\circ$ . Find each measure.



1.  $JM$

\_\_\_\_\_

2.  $m\angle KJM$

\_\_\_\_\_

3.  $KJ$

\_\_\_\_\_

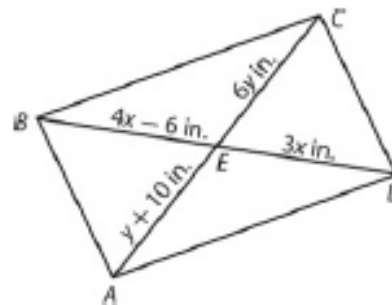
4.  $m\angle LKJ$

\_\_\_\_\_

5.  $m\angle MLK$

\_\_\_\_\_

Use  $\square ABCD$  to find each measure.



6.  $AE$

\_\_\_\_\_

7.  $BE$

\_\_\_\_\_

8.  $CE$

\_\_\_\_\_

9.  $AC$

\_\_\_\_\_

10.  $BD$

\_\_\_\_\_