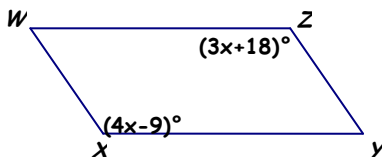


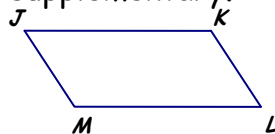
## Parallelogram Properties

~ 1 ~

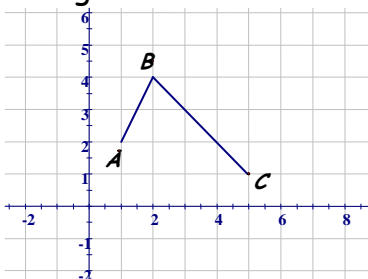
1.  $WXYZ$  is a parallelogram. What is the value of  $x$ ?



4. **Given:**  $JKLM$  is a parallelogram.  
**Prove:**  $\angle J$  and  $\angle K$  are supplementary.



2. Two segments of parallelogram  $ABCD$  are shown below. Which coordinate pair BEST represents the location of Point  $D$ , the fourth vertex of Parallelogram  $ABCD$ ?

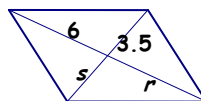


- A.  $(4, 1)$       B.  $(3, 0)$   
 C.  $(4, -1)$     D.  $(3, -1)$

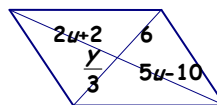
3. Which of the following is not always a property of a parallelogram?  
 A. opposite sides are congruent.  
 B. consecutive angles are congruent.  
 C. diagonals bisect each other.  
 D. opposite angles are congruent.

*Find the value of each variable in the parallelogram. (5-7)*

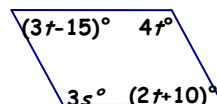
5.



6.



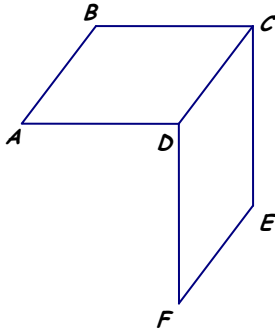
7.



## Parallelogram Properties

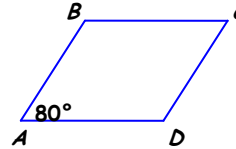
~ 2 ~

8. **Given:**  $ABCD$  and  $CEFD$  are squares.  
**Prove:**  $\overline{AB} \cong \overline{FE}$



11. A four-sided concrete slab has consecutive angle measures of  $70^\circ$ ,  $109^\circ$ ,  $71^\circ$ ,  $110^\circ$ . Is the slab a parallelogram?

12.  $ABCD$  is a parallelogram.

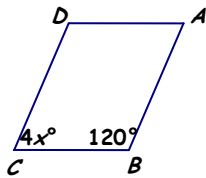


What is the measure of  $\angle C$  ?

9. A parallelogram is a quadrilateral with \_\_\_\_\_.

- A. exactly 1 pair of parallel sides.
- B. opposite angles are supplementary.
- C. both pairs of opposite sides parallel.
- D. with consecutive sides congruent.

10.  $ABCD$  is a parallelogram.



What is the value of  $x$ ?

11. Which of the following is NOT a method for proving a quadrilateral is a parallelogram?

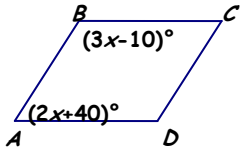
- A. If both pairs of opposite sides of a quadrilateral are congruent, then the quadrilateral is a parallelogram.
- B. If both pairs of opposite angles of a quadrilateral are supplementary, then the quadrilateral is a parallelogram.
- C. If an angle of a quadrilateral is supplementary to both of its consecutive angles, then the quadrilateral is a parallelogram.
- D. If the diagonals of a quadrilateral bisect each other, then the quadrilateral is a parallelogram.

## Parallelogram Properties

~ 3 ~

12. Name 4 properties of parallelograms.

13.  $ABCD$  is a parallelogram.



What is the value of  $x$ ?