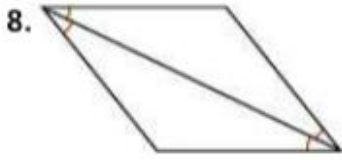


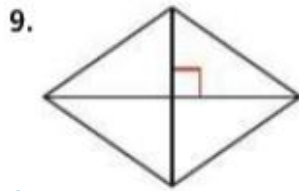
Can you conclude that the parallelogram is a rhombus, a rectangle, or a square? Explain.

See Problem 1.

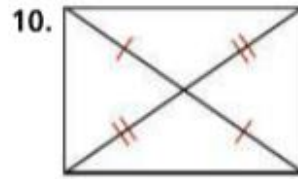


Rhombus  
Diag bisects  $\angle$ 's

For what value of  $x$  is the figure the given special parallelogram?



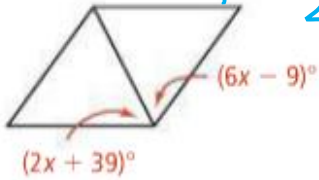
Rhombus. Diag  $\perp$



only  $\square$  ... Diags bisect each other

See Problem 2.

11. rhombus Diags bisect  $\angle$ s

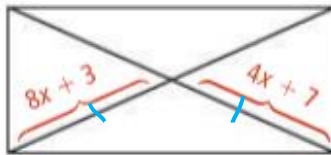


$$2x + 39 = 6x - 9$$

$$48 = 4x$$

$$x = 12$$

12. rectangle Diags  $\cong$

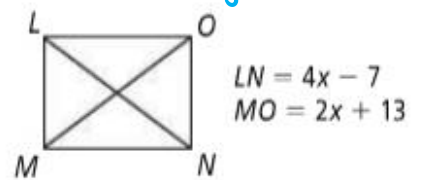


$$8x + 3 = 4x + 7$$

$$4x = 4$$

$$x = 1$$

13. rectangle Diags  $\cong$



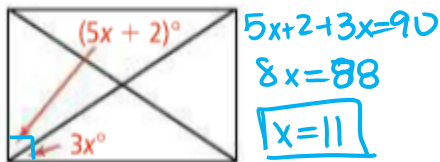
$$4x - 7 = 2x + 13$$

$$2x = 20$$

$$x = 10$$

Algebra For what value of  $x$  is the figure the given special parallelogram?

17. rectangle  $\angle$ s  $90^\circ$

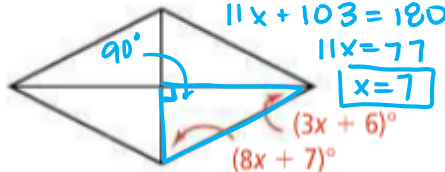


$$5x + 2 + 3x = 90$$

$$8x = 88$$

$$x = 11$$

18. rhombus  $90 + 3x + 6 + 8x + 7 = 180$

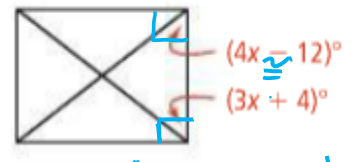


$$11x + 103 = 180$$

$$11x = 77$$

$$x = 7$$

19. rectangle



$$4x - 12 = 3x + 4$$

$$x = 16$$

Determine whether the quadrilateral can be a parallelogram. Explain.

28. The diagonals are congruent, but the quadrilateral has no right angles. **False** ... would be Rect so  $\angle$ s must  $\cong$

29. Each diagonal is 3 cm long and two opposite sides are 2 cm long. **Yes** ... Diags  $\cong$  is a Rectangle and opp sides  $\cong$

30. Two opposite angles are right angles, but the quadrilateral is not a rectangle. **no** ... if one  $\angle = 90$  ... all  $\angle$ s = 90

32. Each diagonal of a quadrilateral bisects a pair of opposite angles of the quadrilateral. What is the most precise name for the quadrilateral?

- (A) parallelogram (B) rhombus (C) rectangle (D) not enough information

33. Given a triangle with side lengths 7 and 11, which value could NOT be the length of the third side of the triangle?

- (F) 13  $\checkmark$  (G) 7  $\checkmark$   $4 < c < 18$  (H) 5  $\checkmark$  (I) 2

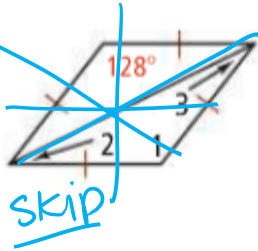
34. What is the sum of the measures of the exterior angles in a pentagon? **always**  $S_E = 360^\circ$

- (A) 180 (B) 360 (C) 540 (D) 108

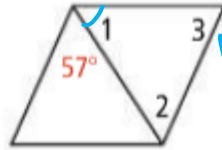
Find the measures of the numbered angles in each rhombus.

Diags bisect  $\angle$ s

36.



37.



$$m\angle 1 = 57^\circ$$

$$m\angle 1 = m\angle 2$$

$$\text{so } m\angle 2 = 57^\circ$$

cons.  
\*  $\angle$ s supp...

$$2(57) = 114$$

$$m\angle 3 = 180 - [2 \cdot 57]$$

$$= 180 - 114$$

$$m\angle 3 = 66^\circ$$