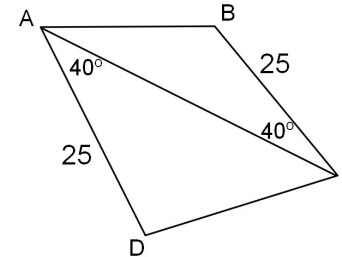


Ways to prove that a Quadrilateral is a Parallelogram:

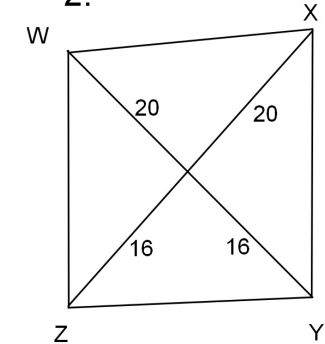
- If both pairs of opposite sides are PARALLEL
- If both pairs of opposite sides are CONGRUENT
- If both pairs of opposite angles are CONGRUENT
- If the diagonals bisect each other
- If one pair of opposite sides is both parallel and congruent

Is each quadrilateral a parallelogram?

1.

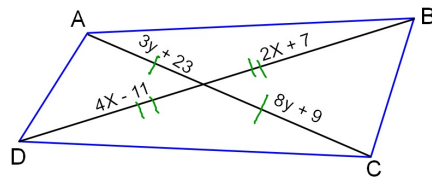


2.



Find the value of the variables that makes the figure a parallelogram.

1.



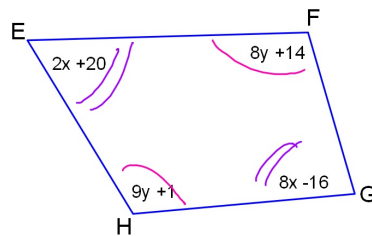
$$3y + 23 = 8y + 9$$

$$y = 2.8$$

$$4x - 11 = 2x + 7$$

$$x = 9$$

2.

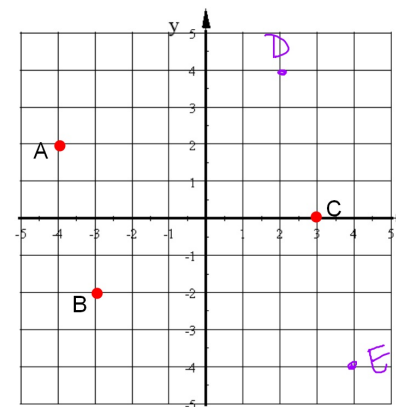


$$9y + 1 = 8y + 14$$

$$y = 13$$

$$2x + 20 = 8x - 16$$

$$6 = x$$



1. Find point D so that ABCD is a parallelogram.

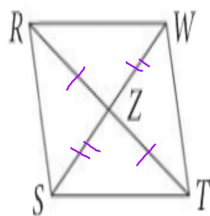
$$D(2, 4)$$

2. Find point E so that ABEC is a parallelogram.

$$E(4, -4)$$

**Multiple Choice** From which given information can you conclude that  $RSTW$  is a parallelogram?

- ☐ A  $\overline{RS} \parallel \overline{WT}, \overline{RS} \cong \overline{ST}$ 
☐ B  $\overline{RS} \parallel \overline{WT}, \overline{ST} \cong \overline{RW}$ 
☐ C  $\overline{RS} \cong \overline{ST}, \overline{RW} \cong \overline{WT}$ 
☒ D  $\overline{RZ} \cong \overline{TZ}, \overline{SZ} \cong \overline{WZ}$



This shows that the diagonals bisect each other.

Hwk #18

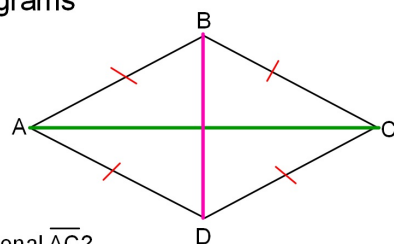
Sec 6-3

Pages 324-326

Problems 2, 5, 15, 16, 22, 23

# Sec 6-4: Special Parallelograms

Rhombus



What happens when you draw diagonal  $\overline{AC}$ ?

Angles A and C are bisected

What happens when you draw diagonal  $\overline{BD}$ ?

Angles B and D are bisected