

1. List the 5 properties of a parallelogram:

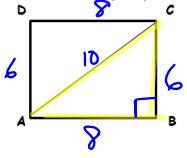
- 1) Opposite sides are parallel
- 2) Consecutive angles are supp.
- 3) Opposite sides are  $\cong$
- 4) Diagonals bisect each other
- 5) Opposite angles are  $\cong$

a. List the 2 additional properties of a rectangle

- 1) All angles are right  $\angle$ s
- 2) Diagonals are  $\cong$

Feb 14-11:03 AM

2. In quadrilateral ABCD,  $AB = 8$ ,  $BC = 6$ ,  $CD = 8$ ,  $DA = 6$  and  $AC = 10$ . Is quadrilateral ABCD a rectangle? Explain your reasoning.



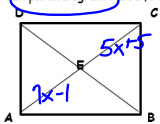
$$6^2 + 8^2 = 10^2$$

$$36 + 64 = 100$$

$$100 = 100 \checkmark$$

Feb 14-11:03 AM

3. In parallelogram ABCD,  $AE = 7x - 1$  and  $EC = 5x + 5$ . Find AC.



$$7x - 1 = 5x + 5$$

$$2x = 6$$

$$x = 3$$

$$AC = 7(3) - 1 + 5(3) + 5 = 40$$

a. If  $DB = 10x + 10$ , find DB.

$$DB = 10(3) + 10 = 40$$

b. What kind of parallelogram is ABCD? Justify your answer.

ABCD is a rectangle since diagonals are  $\cong$ .

Feb 14-11:03 AM