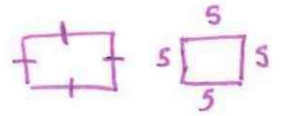


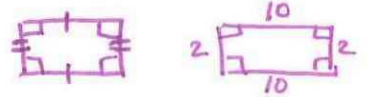
6.4 Rhombuses, Rectangles and Squares

Objective : Use properties of special types of parallelograms

Rhombus: a quadrilateral with 4 congruent sides



Rectangle: a quadrilateral with 4 right angles



Square: a quadrilateral with 4 congruent sides and 4 right angles

both a rhombus & rectangle



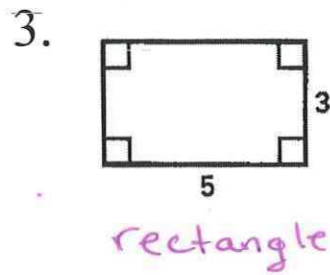
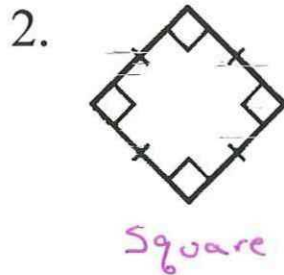
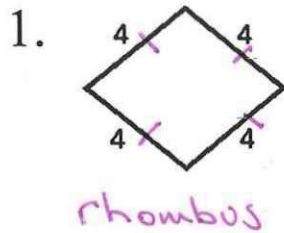
Th: The diagonals of a rectangle are congruent

Th: The diagonals of a rhombus are perpendicular

90°

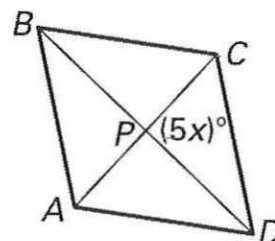
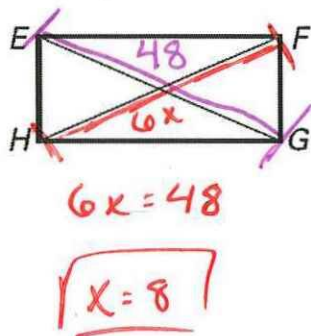
Examples:

Use the information to name the special quadrilateral.



Find x

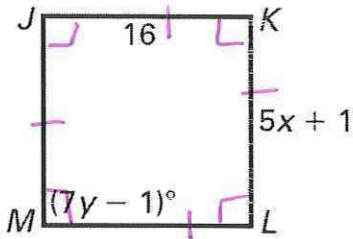
4. rectangle $EFGH$, $EG = 48$, $HF = 6x$ 5. rhombus $ABCD$



$5x = 90$
 $x = 18$

Find the values of the variables

6. square JKLM



$$\begin{array}{r} 5x + 1 = 16 \\ -1 \quad -1 \end{array}$$

$$\frac{5x}{5} = \frac{15}{5}$$

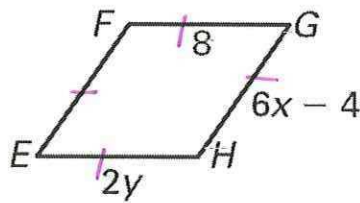
$$\boxed{x = 3}$$

$$\begin{array}{r} 7y - 1 = 90 \\ +1 \quad +1 \end{array}$$

$$\frac{7y}{7} = \frac{91}{7}$$

$$\boxed{y = 13}$$

7. rhombus EFGH



$$\begin{array}{r} 6x - 4 = 8 \\ +4 \quad +4 \end{array}$$

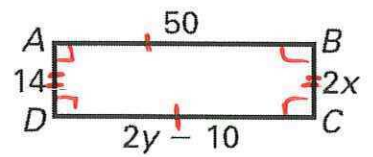
$$\frac{6x}{6} = \frac{12}{6}$$

$$\boxed{x = 2}$$

$$\frac{2y}{2} = \frac{8}{2}$$

$$\boxed{y = 4}$$

8. rectangle ABCD



$$\frac{2x}{2} = \frac{14}{2}$$

$$\boxed{x = 7}$$

$$\begin{array}{r} 2y - 10 = 50 \\ +10 \quad +10 \end{array}$$

$$\frac{2y}{2} = \frac{60}{2}$$

$$\boxed{y = 30}$$

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