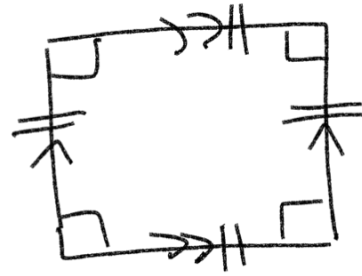


Rectangle
- quadrilateral
- parallelogram

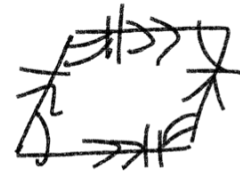
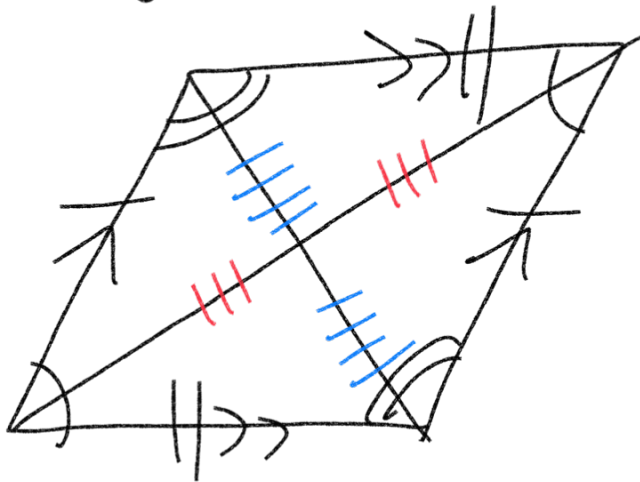


kite
quadrilateral



square
- quadrilateral
- parallelogram
- rectangle
- rhombus

Parallelogram



Diagonals are
bisectors



$$\overline{TR} = 38$$

$$\overline{WR} = 2x + 5$$

$$\overline{WR} = \frac{1}{2} \overline{TR}$$

or

$$2\overline{WR} = \overline{TR}$$

$$2(2x + 5) = 38$$

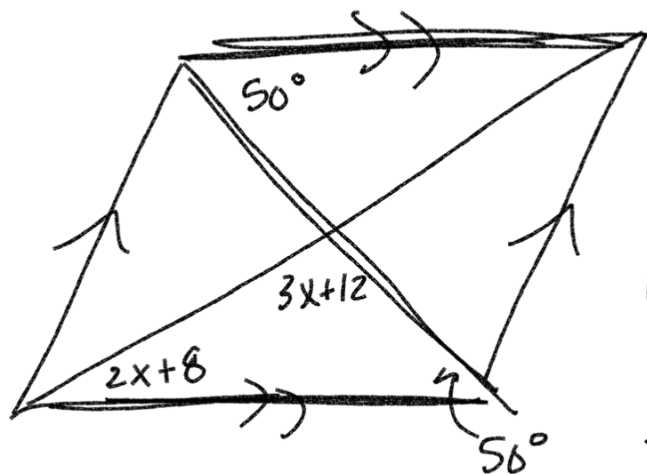
$$\boxed{x = 7}$$

$$4x + 10 = 38$$

$$-10 \quad -10$$

$$4x = 28$$

$$\frac{4x}{4} = \frac{28}{4}$$



Alternate Interior Angles

$$180 = 2x + 8 + 3x + 12 + 50$$

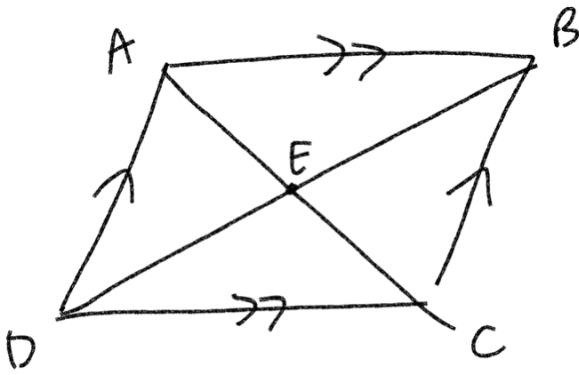
$$180 = 5x + 70$$

$$-70 \quad -70$$

$$\frac{110}{5} = \frac{5x}{5}$$

$$\boxed{x = 22}$$

1.)



$$\overline{AE} = 3x + 8$$

$$\overline{EC} = 5x + 2$$

$$\overline{AE} = \overline{EC}$$

$$\downarrow \quad \downarrow$$

$$3x + 8 = 5x + 2$$

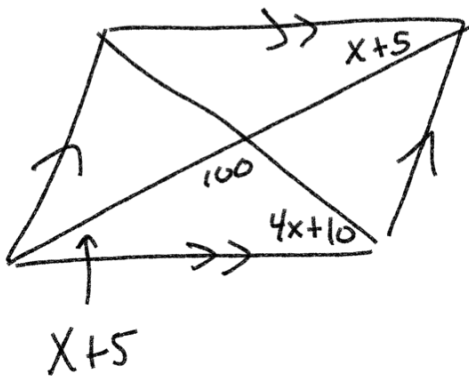
$$\begin{array}{r} -3x \\ \hline 8 = 2x + 2 \end{array}$$

$$\begin{array}{r} -2 \\ \hline 6 = 2x \end{array}$$

$$\frac{6}{2} = \frac{2x}{2}$$

$x = 3$

2.)



$$180 = x + 5 + 100 + 4x + 10$$

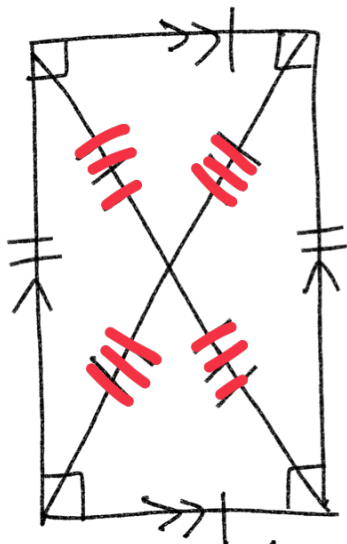
$$180 = 5x + 115$$

$$\begin{array}{r} -115 \\ \hline 65 = 5x \end{array}$$

$$\frac{65}{5} = \frac{5x}{5}$$

$x = 13$

Rectangle (is a parallelogram)



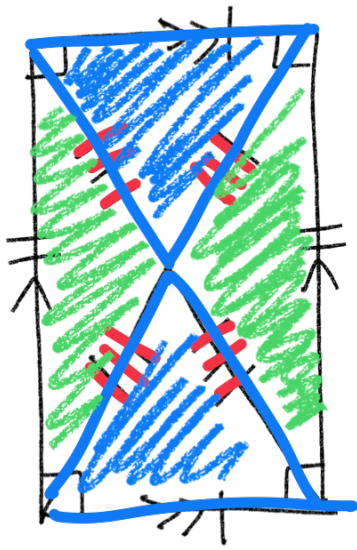
4 equal angles

Parallelogram

Diagonals bisect each other

Rectangle Difference

All diagonals are congruent



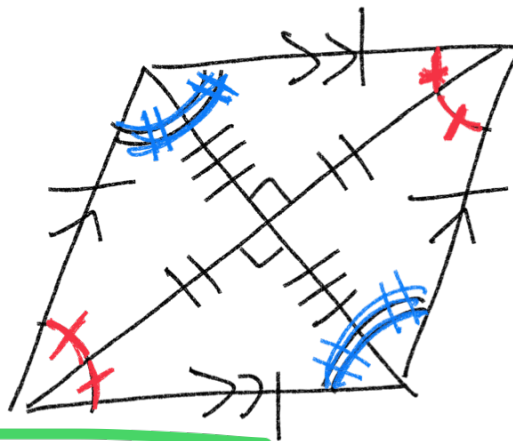
Rectangle

Triangle with equal legs
 Isosceles triangle
 2 pairs of congruent
 isosceles triangles

Rhombus (is also a parallelogram)

Parallelogram

Bisect each other

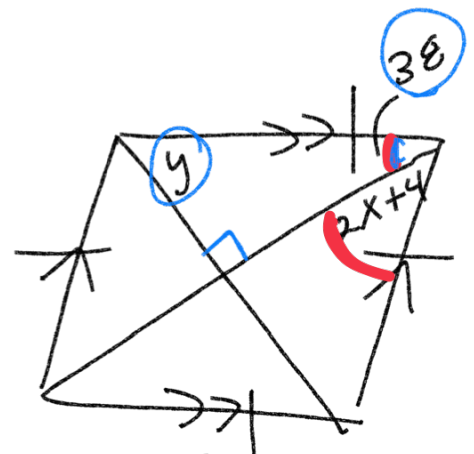


Rhombus
 has 4
 equal sides

Rhombus

Diagonals are
perpendicular bisectors

and
Diagonals are also
 angle bisectors



$$\begin{aligned}
 y + 38 + 90 &= 180 \\
 y + 128 &= 180 \\
 -128 &\quad -128 \\
 \hline
 y &= 52
 \end{aligned}$$

$$\begin{aligned}
 2x + 4 &= 38 \\
 -4 &\quad -4 \\
 \hline
 2x &= 34 \\
 \frac{2x}{2} &= \frac{34}{2} \\
 x &= 17
 \end{aligned}$$

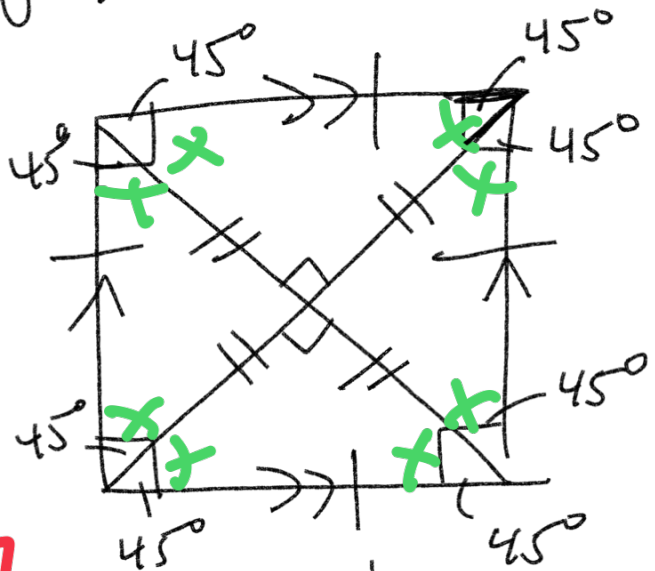
Square (is also parallelogram, rectangle, and rhombus)

Parallelogram

diagonals bisect each other

Rectangle

Diagonals are congruent



Rhombus

Diagonals are perpendicular bisectors

Diagonals are angle bisectors