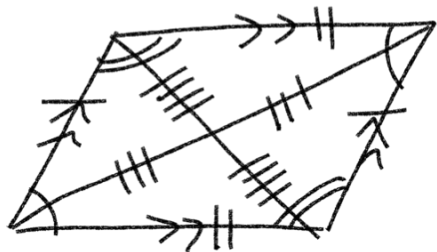


Parallelogram

True for all parallelograms

- Diagonals are bisectors

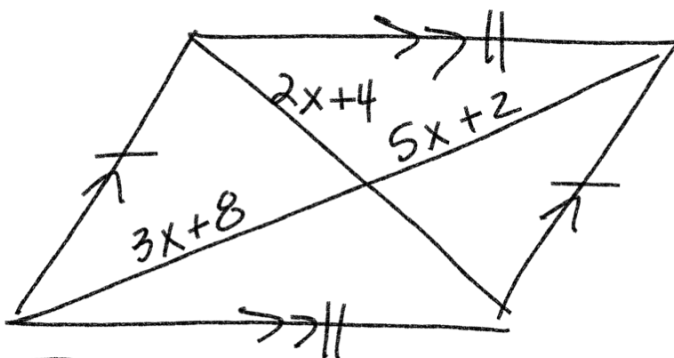


$$\begin{array}{r} 3x+8 = 5x+2 \\ -3x \quad -3x \end{array}$$

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

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

$x = 3$

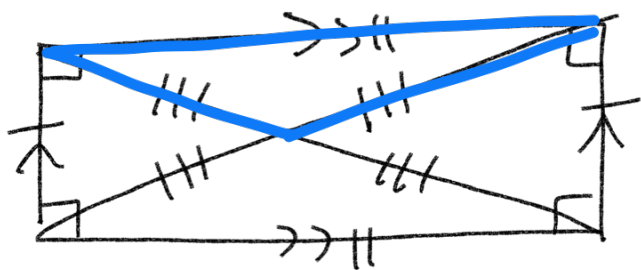


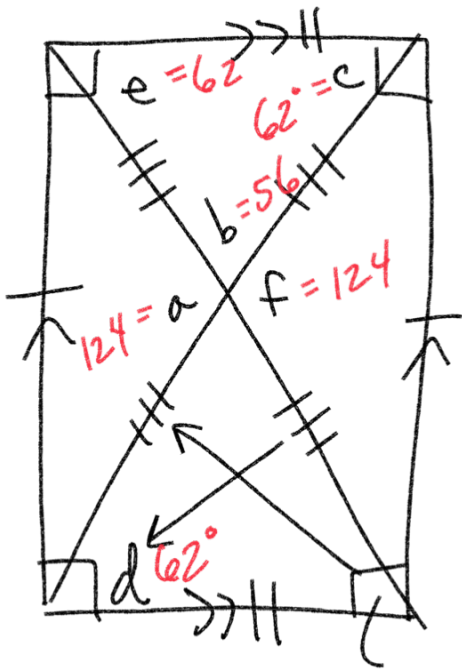
Rectangle (Parallelogram)

4 angle congruent

- Diagonals are congruent

- 2 pairs of isosceles triangles





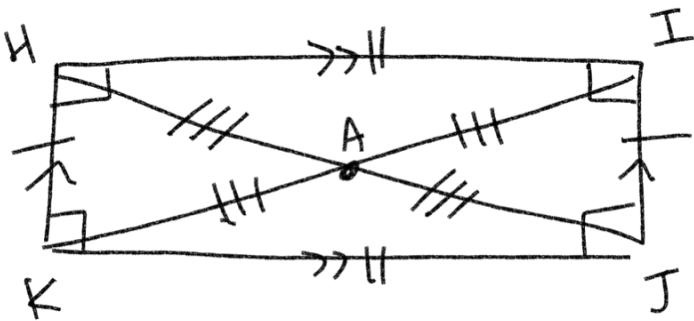
62°

$$180 = 2(62) + b$$

$$180 = 124 + b$$

$$\begin{array}{r} -124 \\ -124 \end{array}$$

$$56 = b$$



$$\overline{HJ} = 2\overline{AK}$$

$$x = 6$$

$a = 124^\circ$ - linear pair

$b = 56^\circ$ sum of interior angles

$c = 62^\circ$ - isosceles

$d = 62^\circ$ - isosceles

$e = 62^\circ$ - Alt interior angles

$f = 124$ - linear pair of vertical angles

$$a + b = 180$$

$$a + 56 = 180$$

$$\begin{array}{r} -56 \\ -56 \end{array}$$

$$a = 124$$

$$\overline{HJ} = 3x + 7$$

$$\overline{IK} = 6x - 11$$

$$\overline{HJ} = \overline{IK}$$



$$3x + 7 = 6x - 11$$

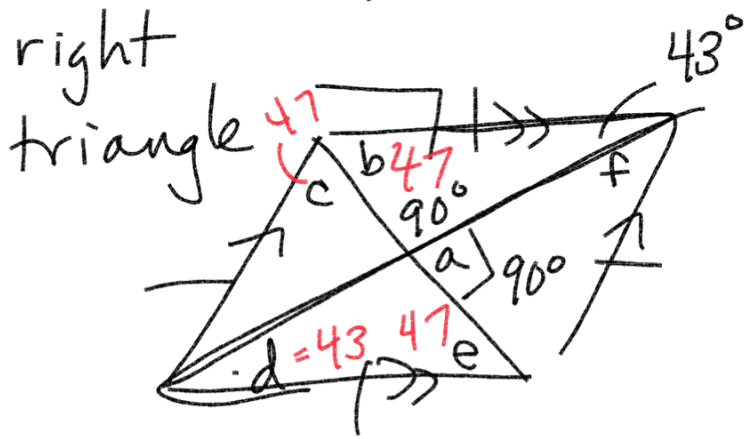
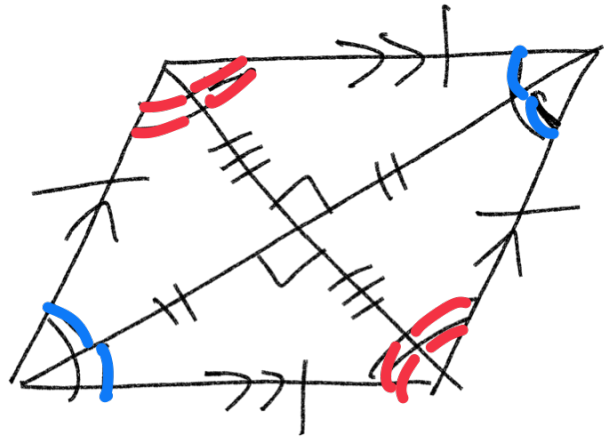
$$\begin{array}{r} +11 \\ +11 \end{array}$$

$$3x + 18 = 6x$$

$$\begin{array}{r} -3x \\ -3x \end{array}$$

$$\frac{18}{3} = \frac{3x}{3}$$

Rhombus



$$180 = 90 + 43 + b$$

$$180 = 133 + b$$

$$-133 \quad -133$$

$$47 = b$$

4 equal sides

- Diagonals are perpendicular bisectors

- Diagonals are angle bisectors

a = 90° bisectors are perpendicular bisectors

b = 47 sum of interior

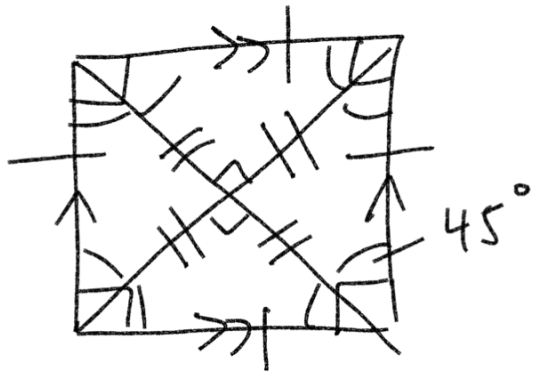
c = 47 angle bisector

d = 43 - alt. interior

e = 47 - alt. interior

f = 43 - angle bisector

Square



4 equal angles

4 equal sides

Parallelogram

- diagonals are bisectors

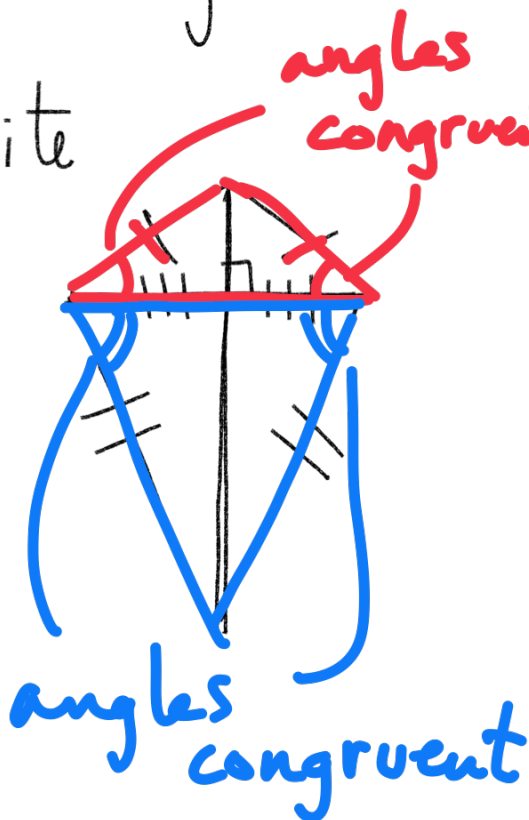
Rectangle

- diagonals are congruent

Rhombus

Diagonals are perpendicular bisectors and angle bisectors

Kite



angles congruent

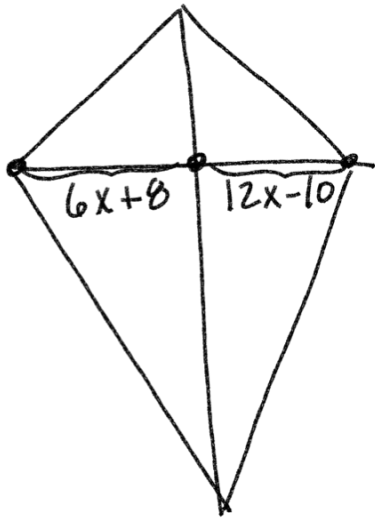
congruent

Adjacent sides equal

one diagonal is a perpendicular bisector

Isosceles triangle

Isosceles triangle



$$6x + 8 = 12x - 10$$

$$-6x \quad -6x$$

$$8 = 6x - 10$$

$$+10 \quad +10$$

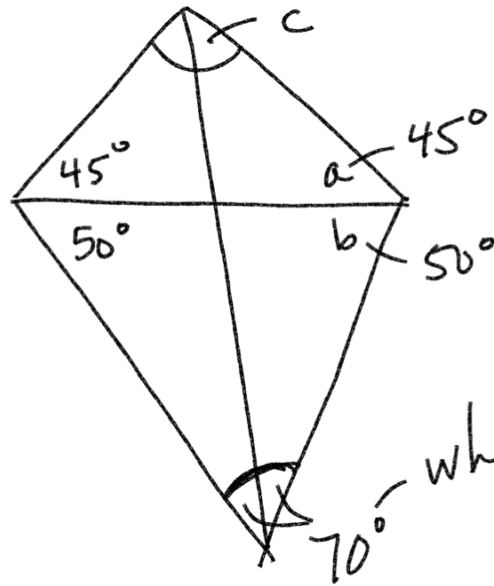
$$\frac{18}{6} = \frac{6x}{6}$$

$$x = 3$$

$$a = 45^\circ$$

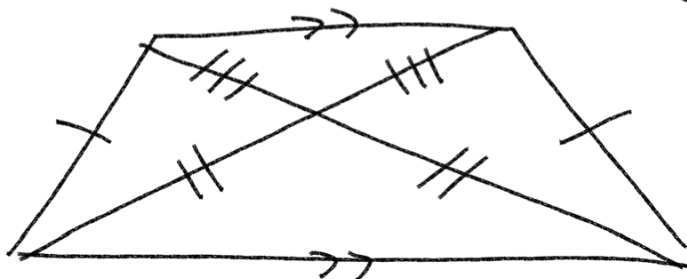
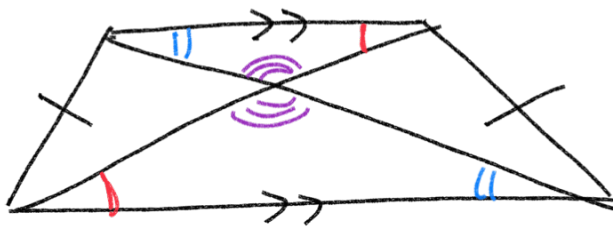
$$b = 50^\circ$$

$$c = 90^\circ$$



Trapezoid

isosceles trapezoid



Create 2 pairs of
isosceles
triangles

