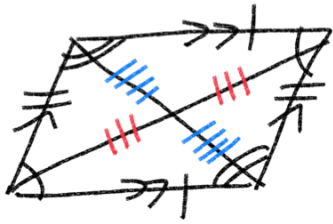
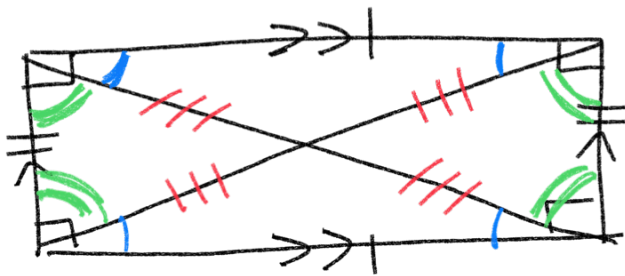


Parallelogram

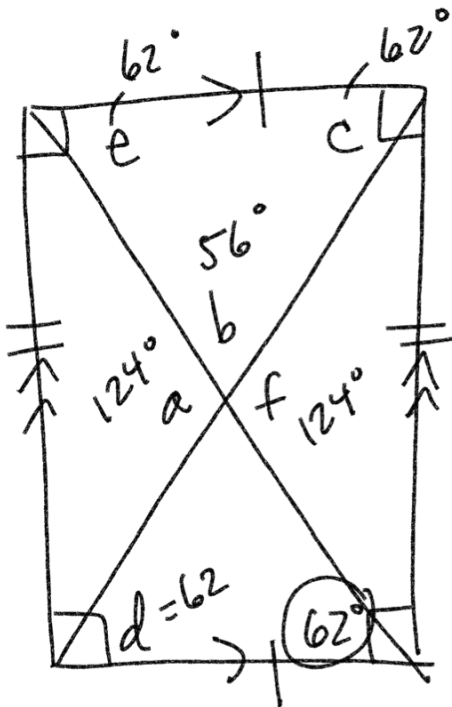


True for all parallelograms
 - Diagonals are bisectors



Rectangle

4 equal angles
 - Diagonals are congruent
 2 pairs of isosceles triangles



$a = 124^\circ$ Linear pair
 $b = 56^\circ$ sum of interior angles in triangle
 $c = 62^\circ$ Isosceles
 $d = 62^\circ$ Isosceles
 $e = 62^\circ$ Alt Int angles
 $f = 124^\circ$ Vertical

$$180 = b + e + c$$

$$180 = b + 62 + 62$$

$$180 = b + 124$$

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

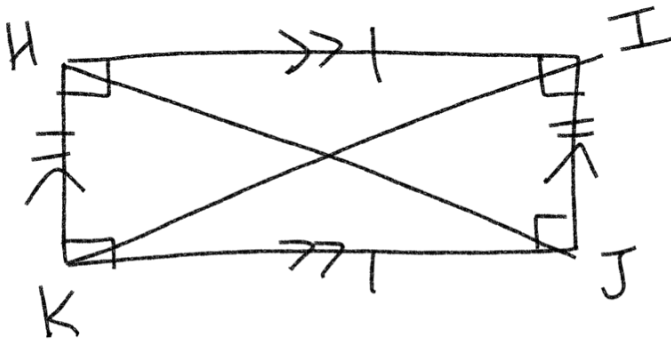
$$b = 56^\circ$$

$$180 = a + b$$

$$180 = a + 56$$

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

$$124^\circ = a$$



$$x = 6$$

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

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

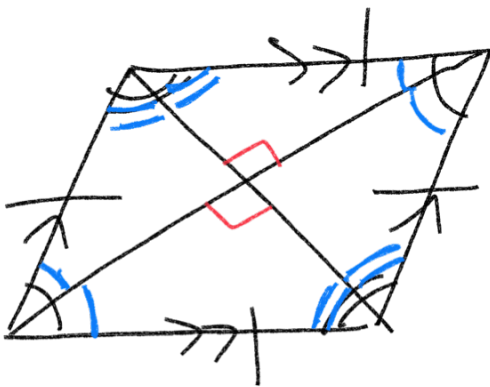
$$\overline{HJ} = \overline{IK}$$

$$\downarrow \qquad \downarrow$$

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

$$7 = 3x - 11$$

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



Rhombus

4 equal sides

- diagonals are
perpendicular bisectors

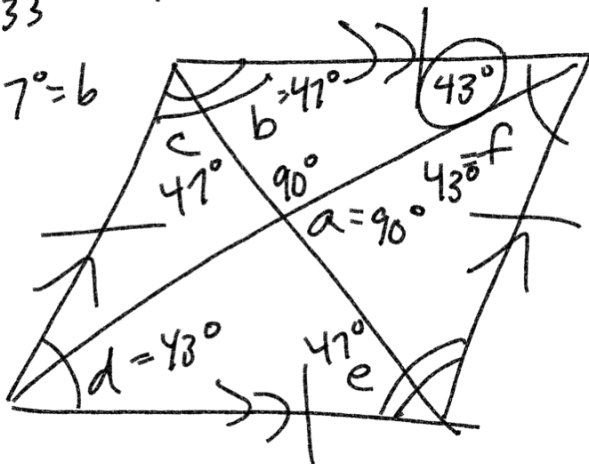
- diagonals are
angle bisectors

$$180 = b + 90 + 43$$

$$180 = b + 133$$

$$-133 \quad -133$$

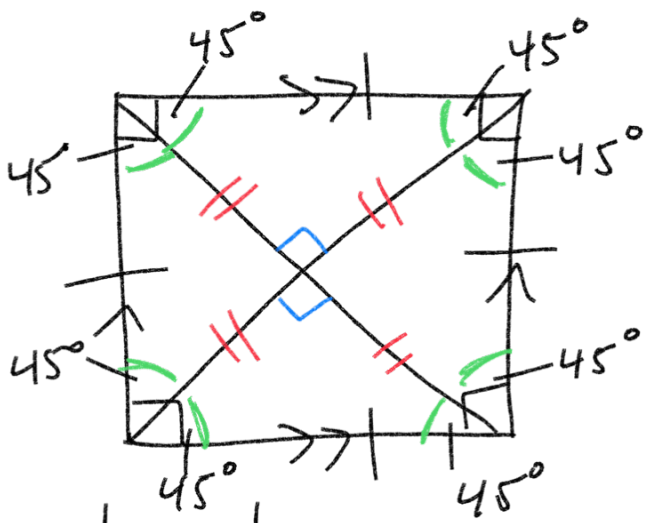
$$47 = b$$



$$a = 90^\circ \text{ perp bis} \quad d = 43^\circ \text{ Alt. Int}$$

$$b = 47^\circ \quad e = 47^\circ \text{ Alt. Int}$$

$$c = 47^\circ \text{ angle bisector} \quad f = 43^\circ \text{ angle bisector}$$



rhombus

Square

4 equal angles

4 equal sides

parallelogram

- diagonals are bisector

- diagonals are perpendicular bisectors

rectangle

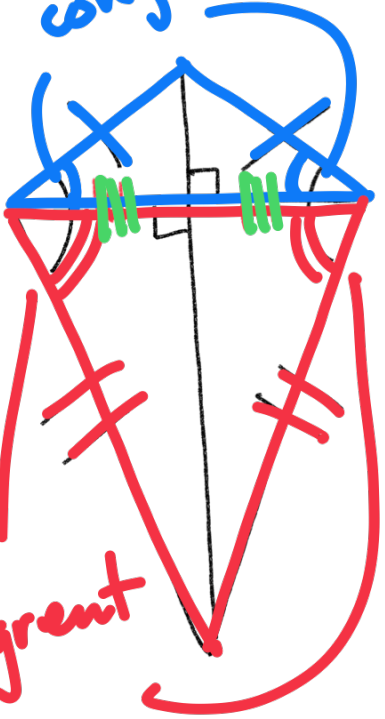
- diagonals are congruent

- diagonals are angle bisectors

congruent

kite

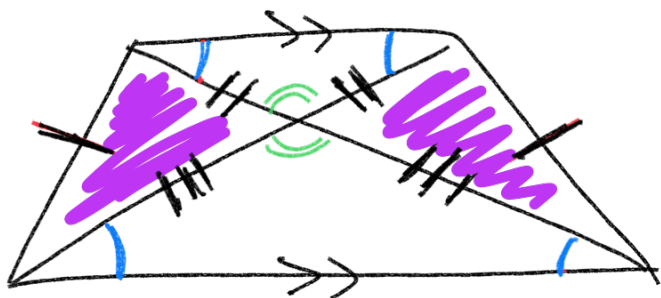
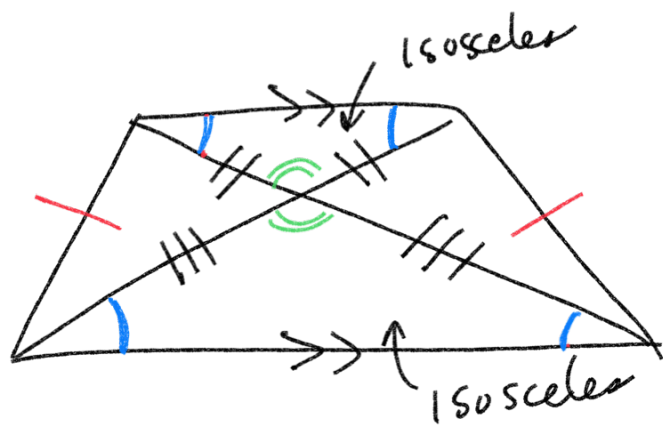
one diagonal features a perpendicular bisector



congruent

Isosceles Triangle

Isosceles Triangle



Trapezoid

Isosceles Trapezoid

Congruent-Alt. Interior

Congruent-Vertical

Congruent
triangles
SAS or SSS