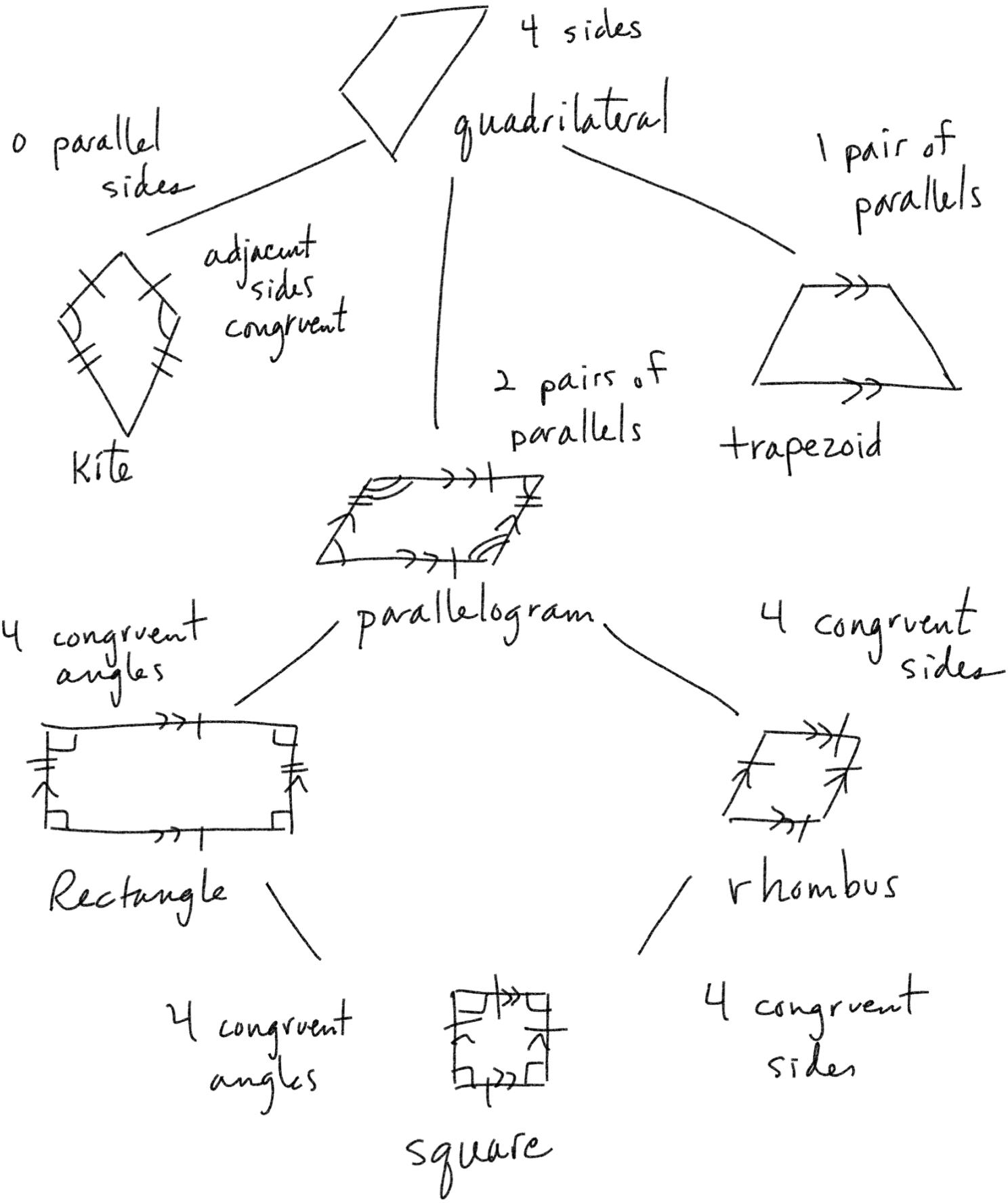
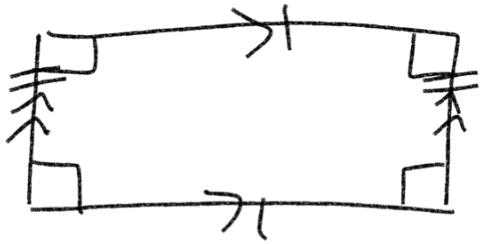
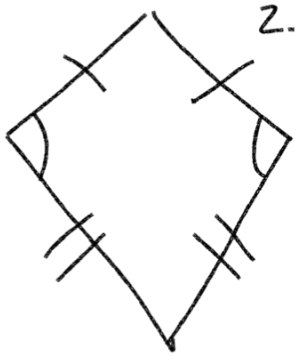
T-G Geometry Week 25 3/12

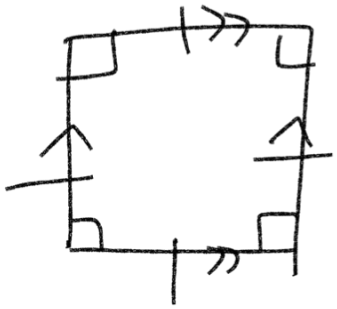




1.) Rectangle
- quadrilaterals
- parallelogram

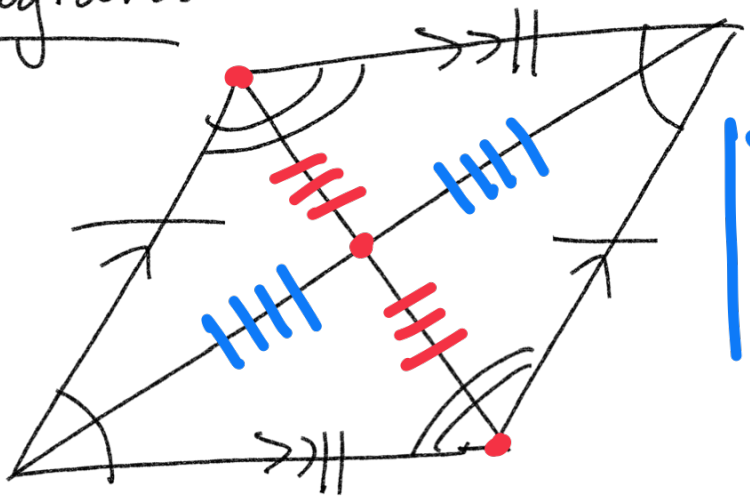


2.) kite
- quadrilateral

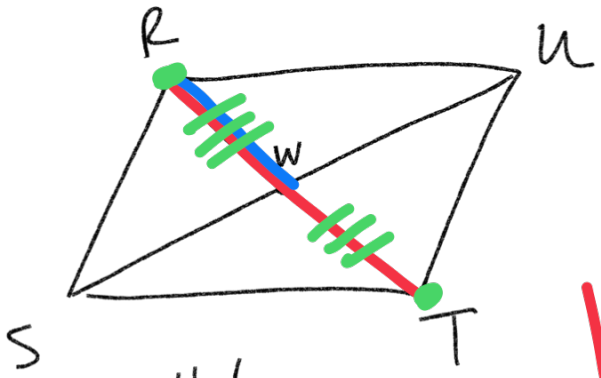


3.) Square
- parallelogram
- quadrilateral
- rectangle
- rhombus

Parallelograms



Diagonals are bisectors



parallelogram

$\overline{TR} = 38$

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

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

$38 = 2(2x+5)$

$38 = 4x+10$

$-10 \quad -10$

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

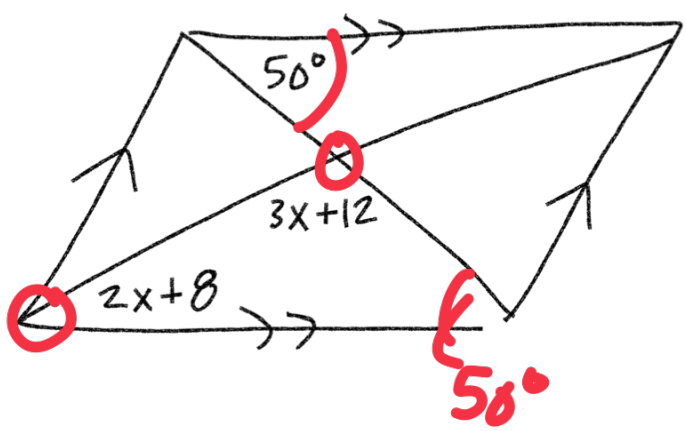
$7 = x$

$\overline{WT} \cong \overline{WR}$

$\overline{WT} + \overline{WR} = \overline{RT}$

$\overline{WR} + \overline{WR} = \overline{RT}$

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



Alternate Interior Angles

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

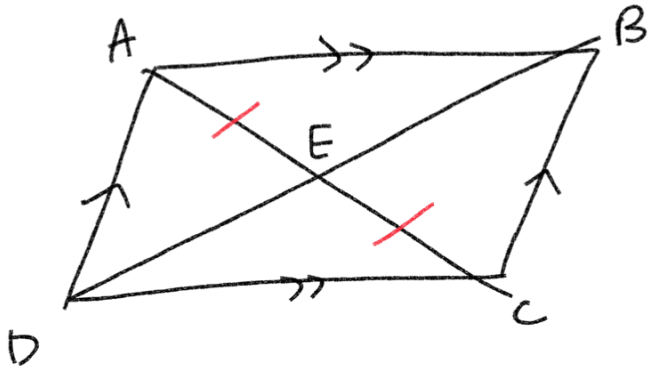
$5x + 70 = 180$

$-70 \quad -70$

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

$x = 22$

1.)



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

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

$\overline{AE} \cong \overline{EC}$

$3x + 8 = 5x + 2$

$-3x \qquad -3x$

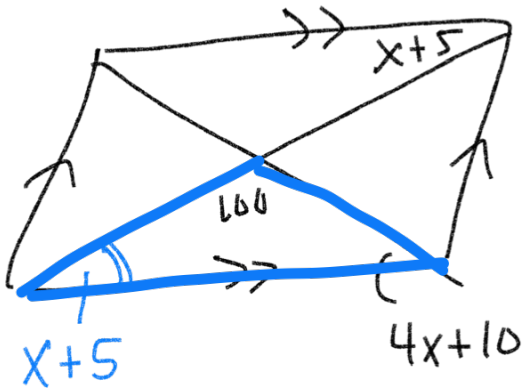
$8 = 2x + 2$

$-2 \qquad -2$

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

$\boxed{x = 3}$

2.)



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

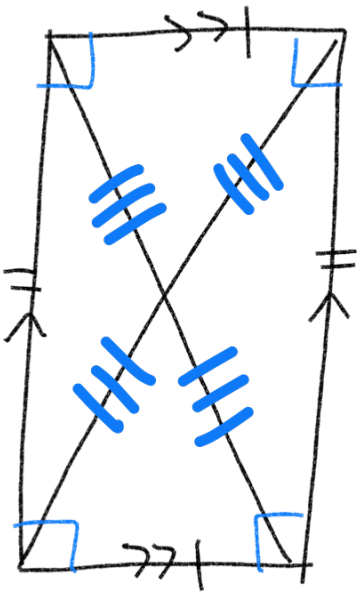
$5x + 115 = 180$

$-115 \qquad -115$

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

$\boxed{x = 13}$

Rectangle (is a parallelogram)



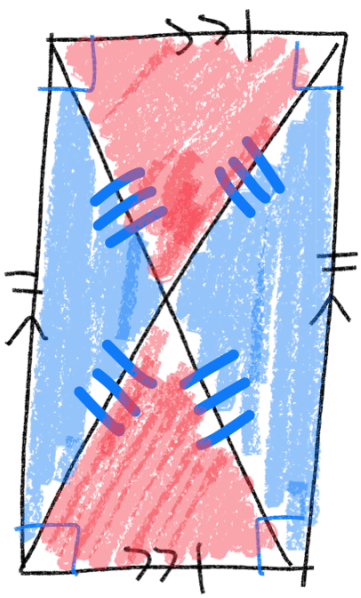
4 equal angles

Parallelogram

Diagonals bisect each other

Rectangle (Difference)

All Diagonals are congruent.



Rectangle

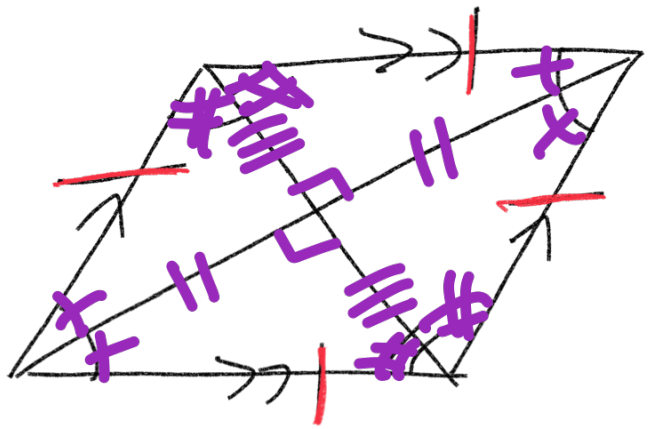
Triangle with equal legs
Isosceles Triangle

2 pairs of congruent isosceles triangles

Rhombus (is also a parallelogram)

Parallelogram

$\boxed{\text{Diagonals bisect each other}}$

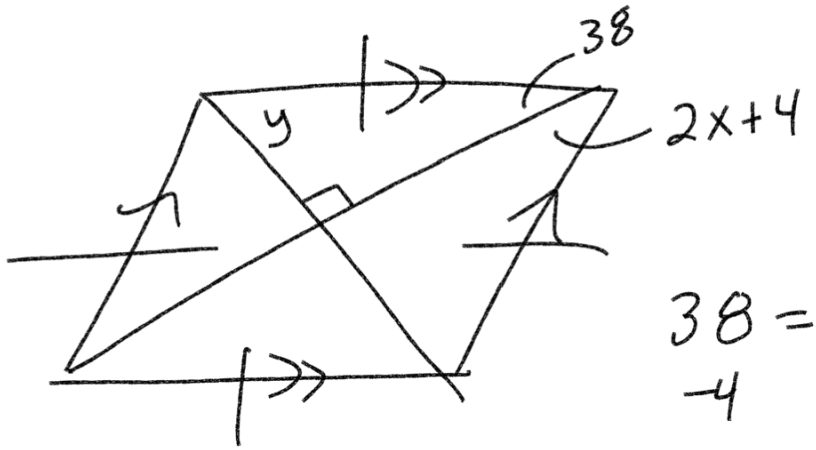


4 congruent sides

Rhombus

$\boxed{\text{Diagonals are perpendicular bisectors}}$

$\boxed{\text{Diagonals are also angle bisectors}}$



x =

y =

$$38 = 2x + 4$$
$$-4 \qquad -4$$

$$\frac{34}{2} = \frac{2x}{2}$$

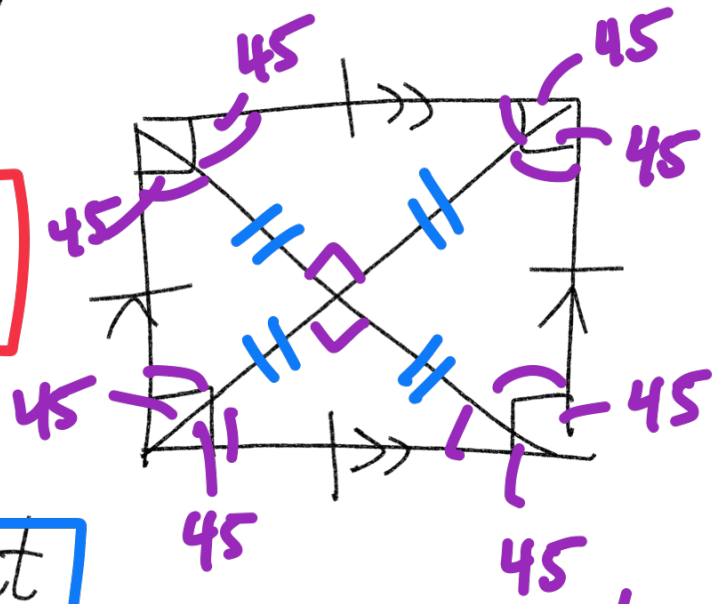
$$\boxed{x = 17}$$

$$90 + y + 38 = 180$$

$$128 + y = 180$$
$$-128 \qquad -128$$

$$\boxed{y = 52}$$

Square (is also a parallelogram, rectangle, and a rhombus)



4 equilateral triangles

Parallelogram

Diagonals are bisectors

Rectangle

Diagonals are congruent

Rhombus

Diagonals are perpendicular sectors

Diagonals are angle bisectors