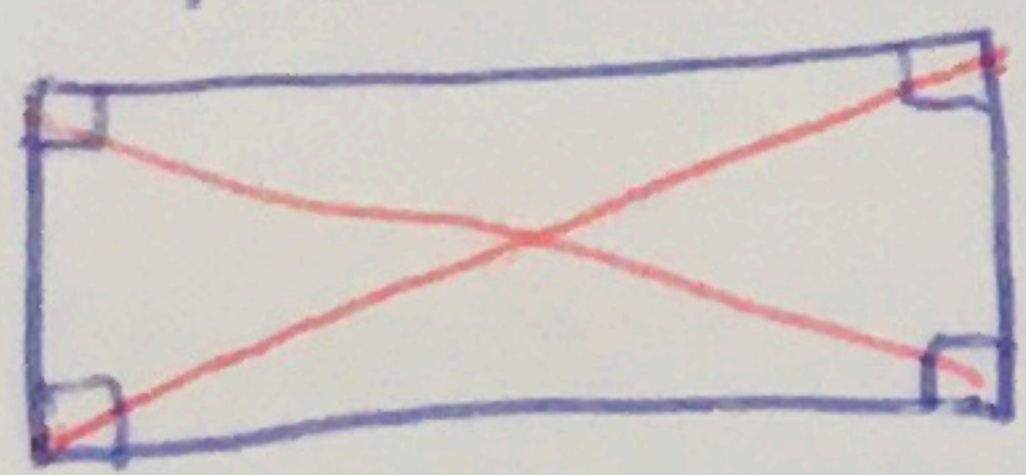


1. opposite sides are congruent
2. Opposite angles are congruent
3. Consecutive angles are supplementary  
(EX.  $A + D = 180^\circ$ )
4. If one angle is right, all angles are right.
5. The diagonals bisect each other
6. Each diagonal separates the parallelogram into two congruent triangles

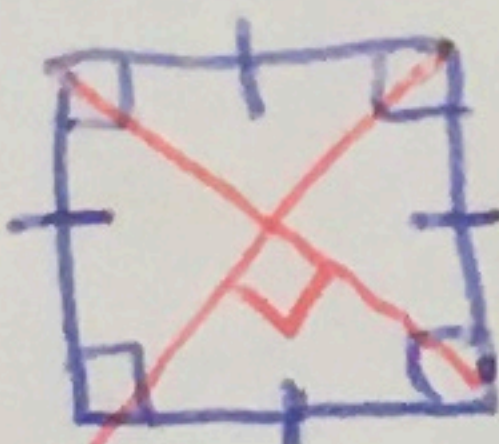
THESE ARE <sup>also</sup> TYPES OF PARALLELOGRAM



Rectangles

- Diagonals are congruent

- 4  $90^\circ$  corner angles



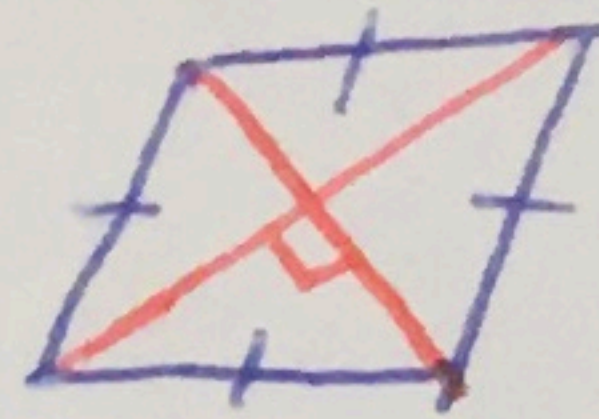
Squares

- Diagonals are perpendicular  $= 90^\circ$

- Diagonals are congruent

- 4  $90^\circ$  corner angles.

- Sides are congruent



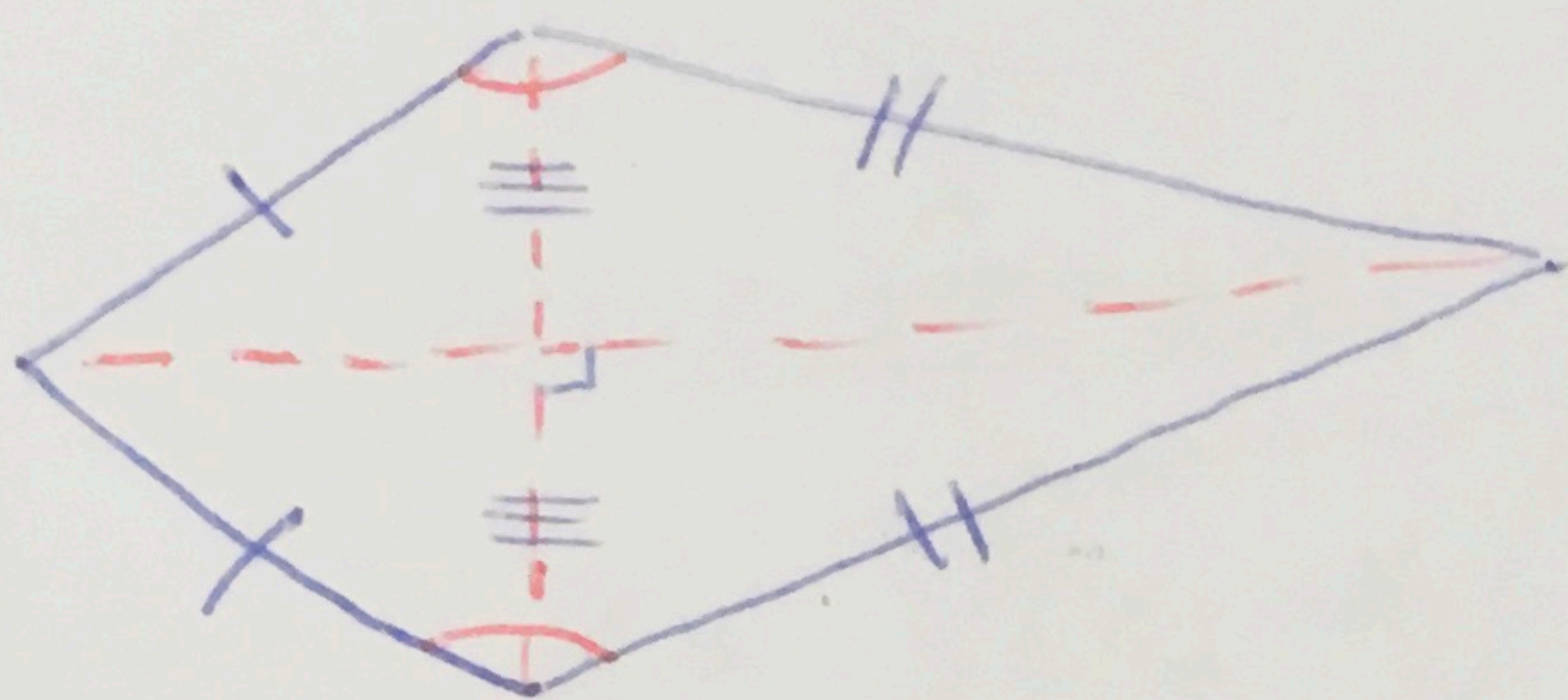
Rhombuses

- Diagonals are perpendicular  $(= 90^\circ)$

- Sides are congruent

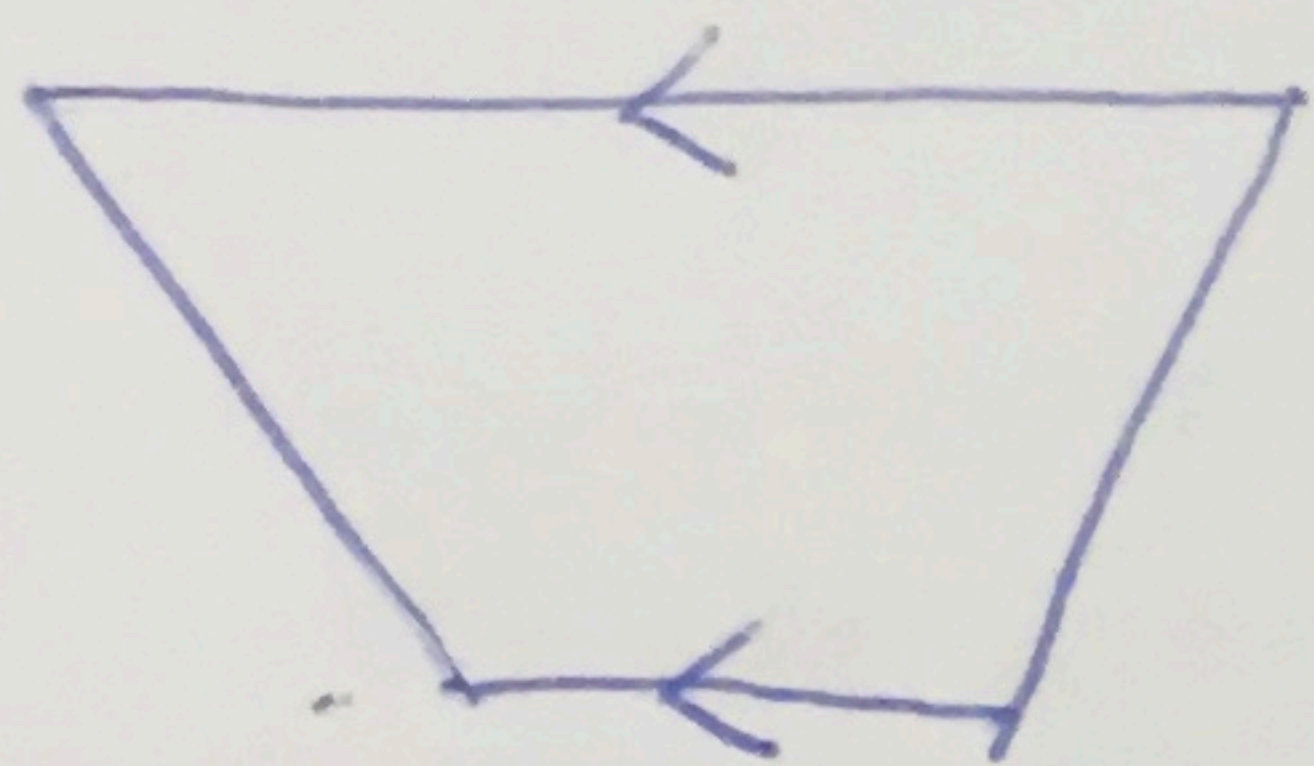


Kite



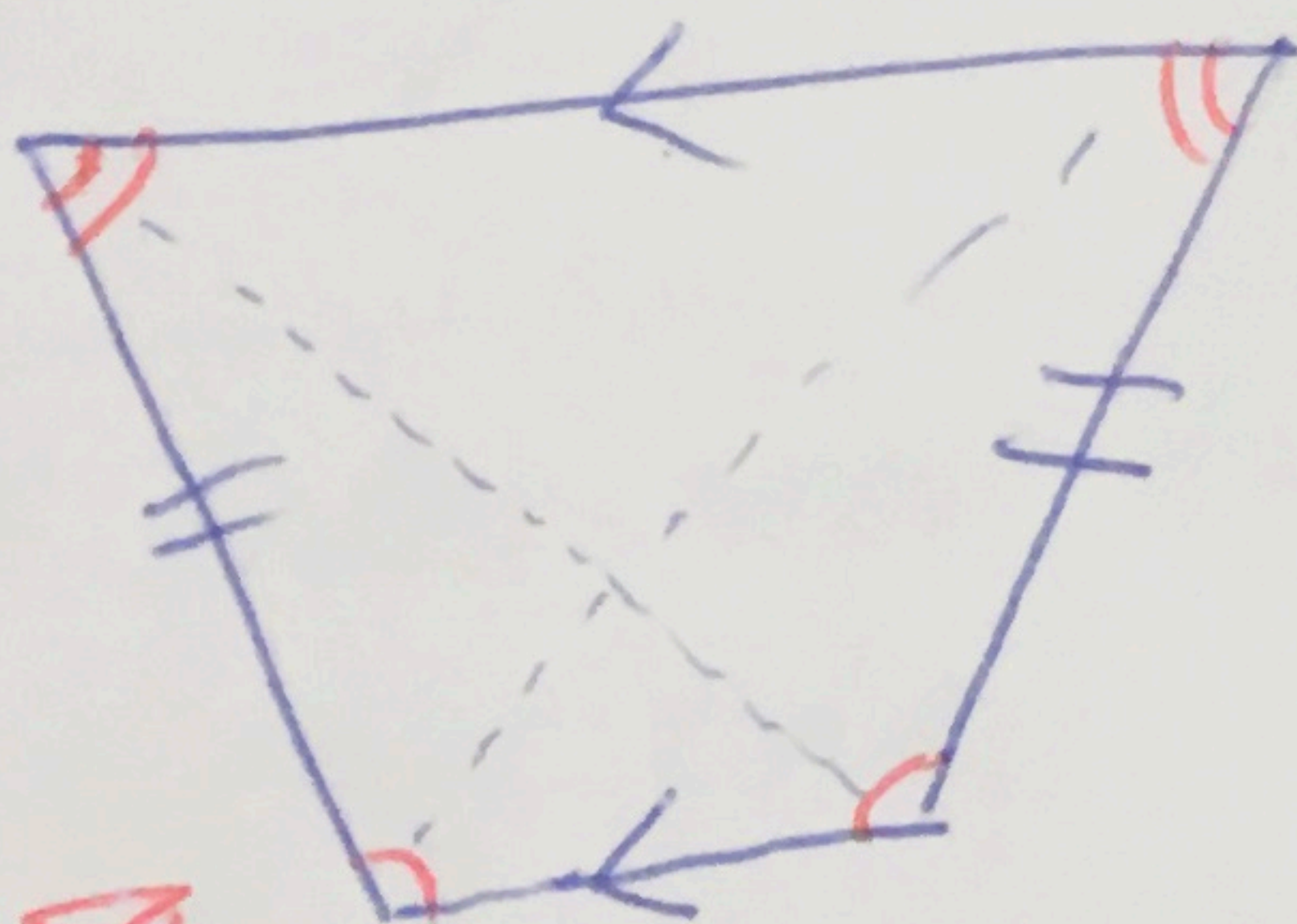
- Two congruent side angles
- Two congruent triangles
- Diagonals are perpendicular ( $90^\circ$ )

Trapezoid



- Parallel bases
- Non-parallel legs
- Diagonals are congruent

Isosceles Trapezoid

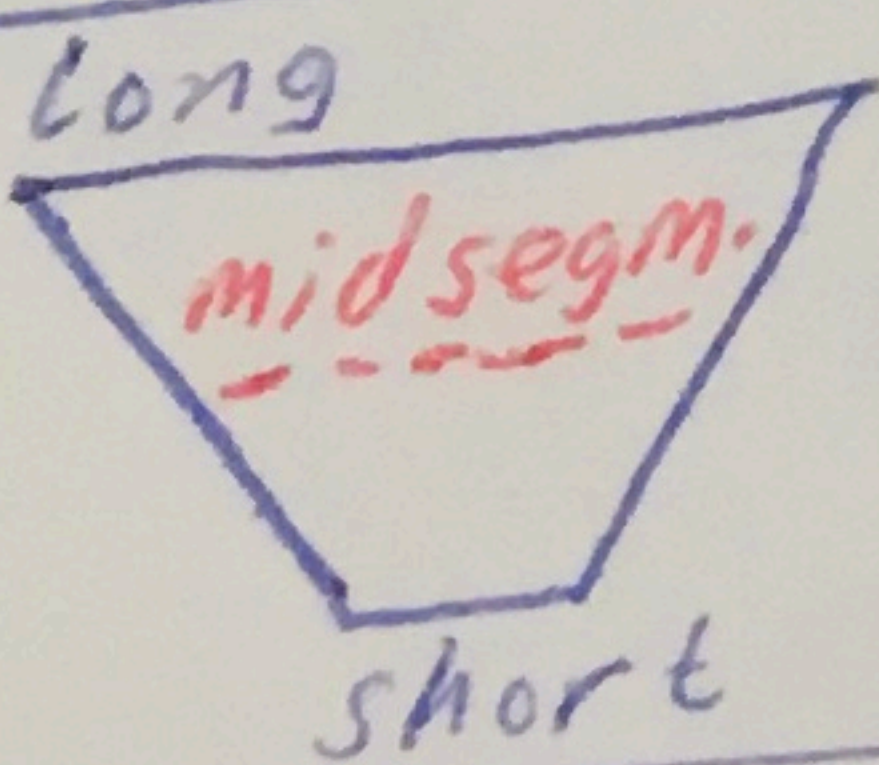


If you have  $y = -\frac{5}{2}x + 4$

then the slope of a parallel line would be  $-\frac{5}{2}$

and the slope of a perpendicular line would be  $+\frac{2}{5}$

MIDSEGMENTS

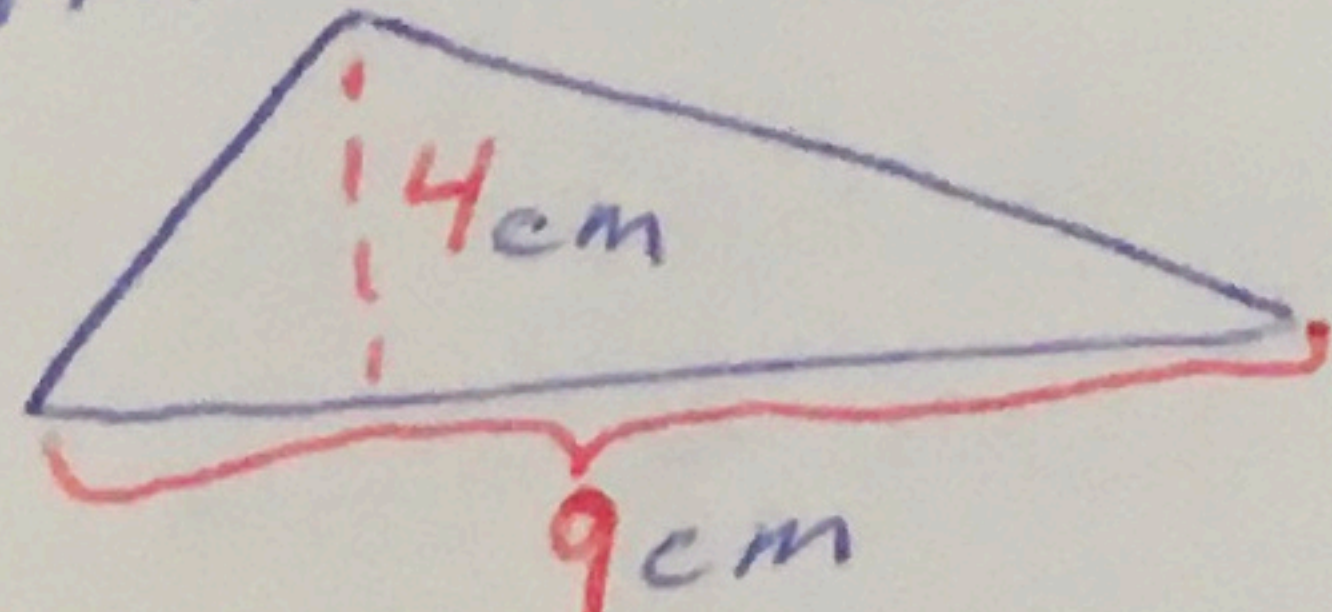


$$0.5 \cdot (\text{long} + \text{short}) = \text{midsegment}$$

↑  
so you change the sign and flip the numbers.

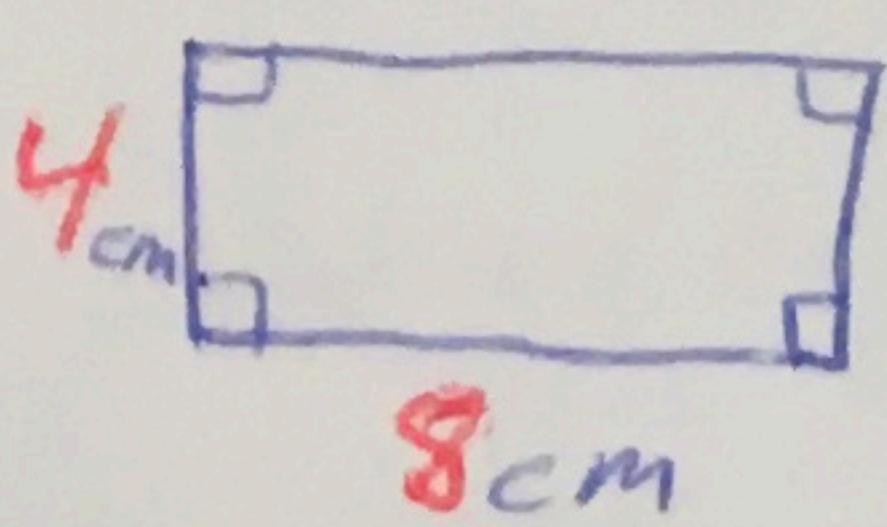
Area of a:

TRIANGLE



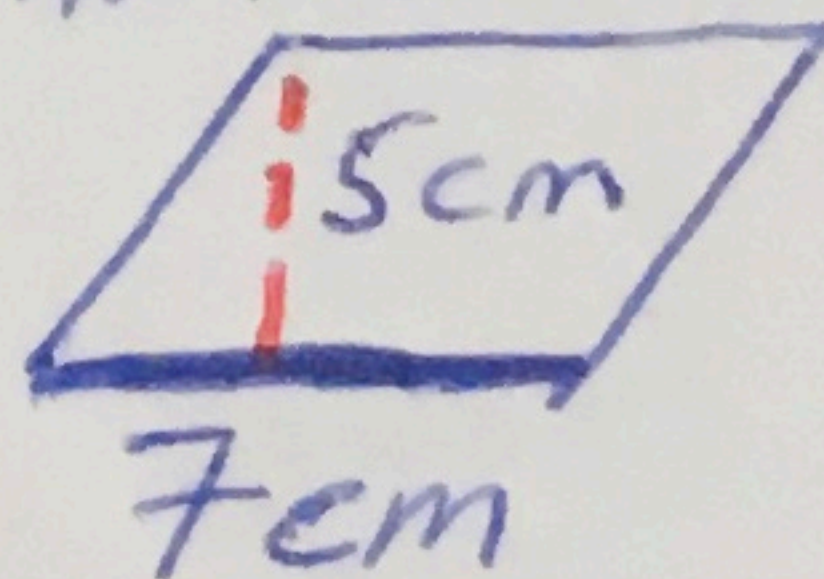
$$\frac{1}{2} \cdot 4 \cdot 9 = 0.5 \cdot 36 = 18 \text{ cm}^2$$

RECTANGLE



$$8 \cdot 4 = 32 \text{ cm}^2$$

PARALLELOGRAM or RHOMBUS



$$7 \cdot 5 = 35 \text{ cm}^2$$