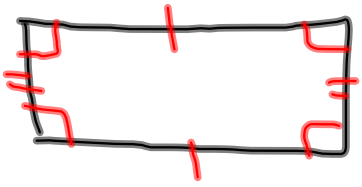
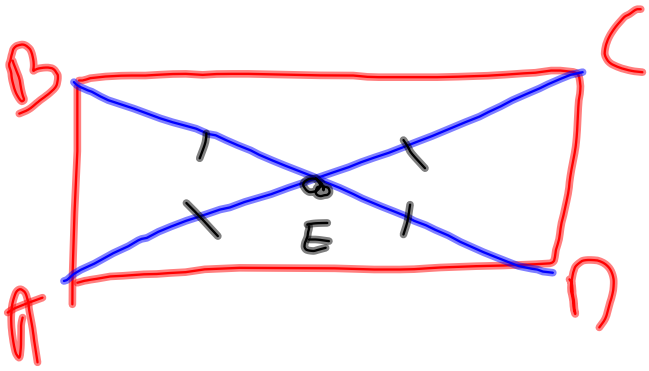
6.4 Special ▱

Rectangle: a quad. with 4 rt. ∠'s.

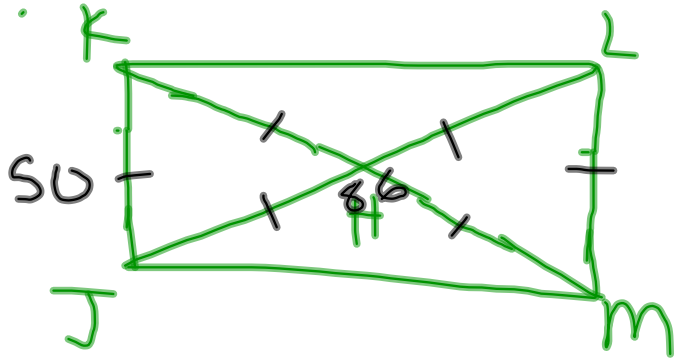


6-4-1: if a quad. is a retangle, then it is ▱.

6-4-2: if a ▱ is a rectangle, then it's diagonals are ≅



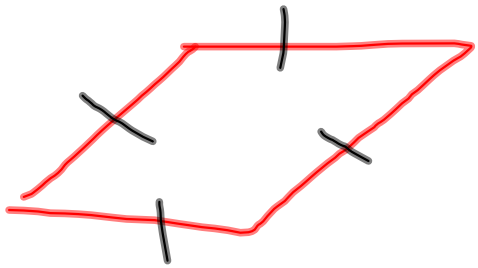
Ex:



JK = 50 JL = 86

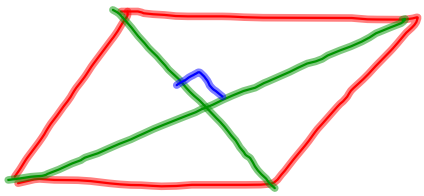
a) LM = 50 HM = 43

rhombus: quad. with 4 ≅ sides.

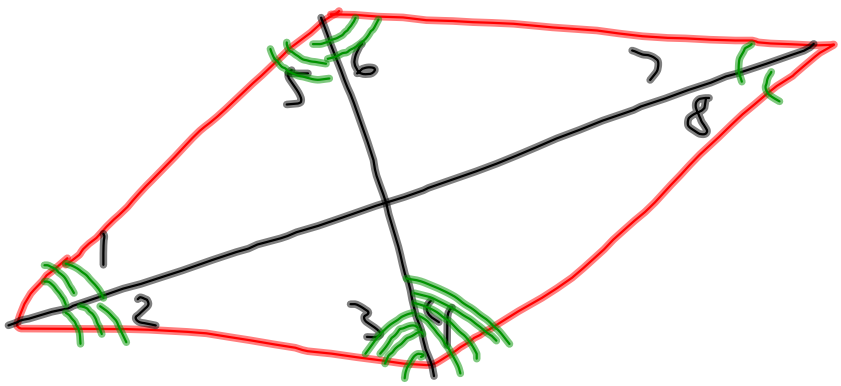


6-4-3: if a quad. is a rhombus, then it is a ▱.

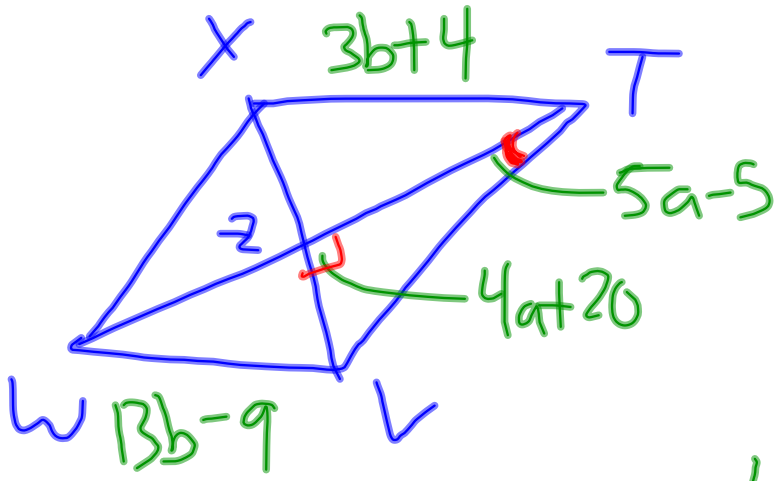
6-4-4: if a ▱ is a rhombus, then its diagonals are ⊥.



6-4-5: if a ▱ is a rhombus, then each diagonal bisects a pair of opp ∠'s.



Ex:



$4a+20=90$

$-20 \quad -20$

$\frac{4a}{4}=\frac{70}{4}$

$a=17.5$

$m\angle VTZ$

$=5a-5$

$=5(17.5)-5$

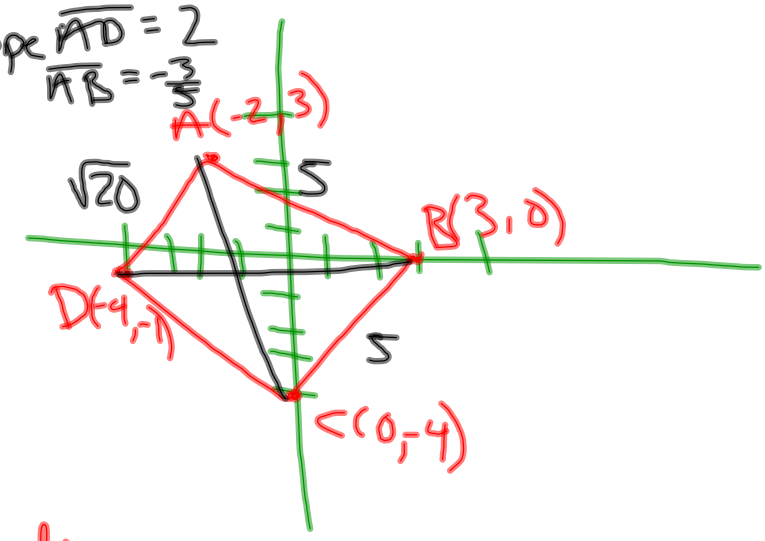
$=82.5°$

Square: a quad. with 4 $\cong$ sides and 4 rt. $\angle$'s.

Show the following is a square

slope $\overline{AD} = 2$

" $\overline{AB} = -\frac{3}{5}$



a) diagonals are $\cong$.

AC

A(-1,3) C(0,-4)

BD

(3,0) (-4,-1)

b) slope of AC + BD

AC=

BD=

c) midpt. of AC + BD

AC

BD

HW: p. 412

2-30 even, 35

odds extra credit