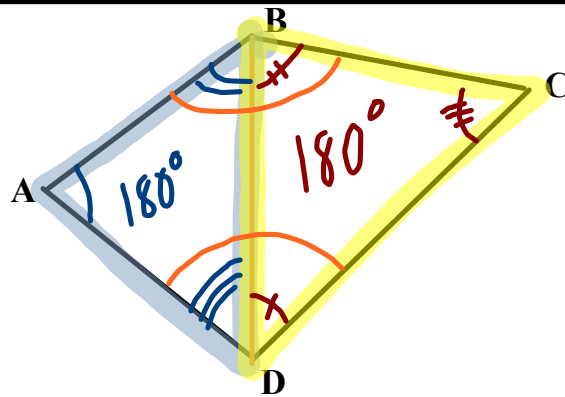


## 5.7. Quadrilaterals

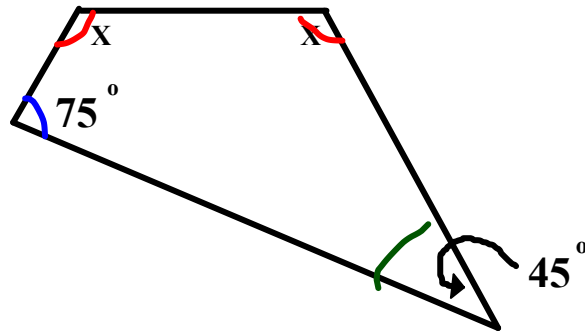
Feb. 13, 2007



Quad ABCD Has  $360^\circ$

Th<sup>m</sup> 5-4: The Sum of the  
angles of Any Quadrilateral  
is  $360^\circ$

ex 1)



find 'x'

$$\underline{75} + \underline{x} + \underline{x} + \underline{45} = 180^\circ$$

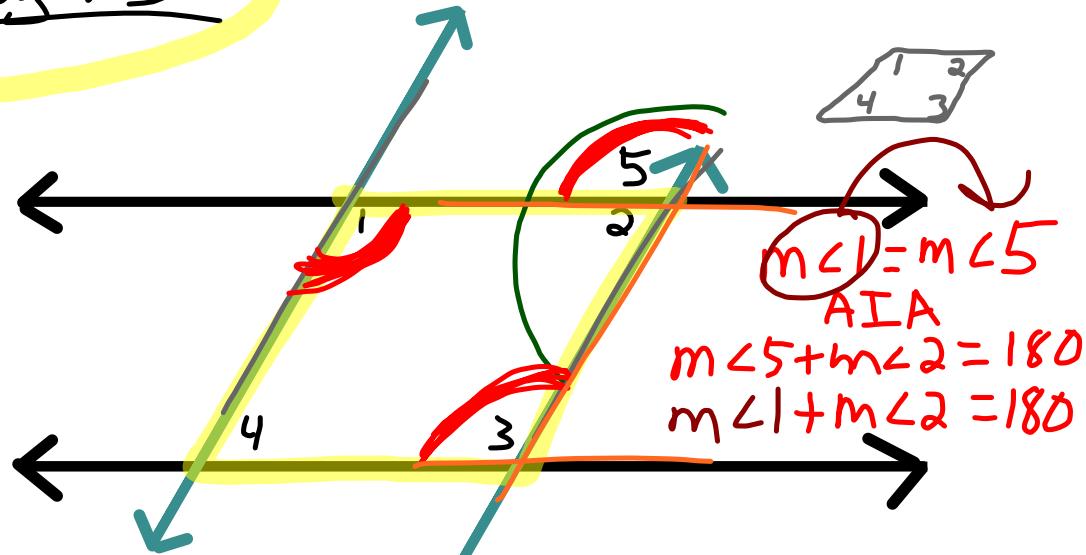
$$2x + 120 = 180$$

$$\underline{-120} \quad \underline{-120}$$

$$\frac{2x}{2} = \frac{60}{2}$$

$$\underline{x = 30^\circ}$$

# Parallelograms



$\angle 1 + \angle 2$  are called  
Consecutive Angles  
 as are  $\angle 3 + \angle 4$ ,  $\angle 2 + \angle 3$ ,  $\angle 1 + \angle 4$

$\angle 1 + \angle 3$  are called  
Opposite Angles  
 as are  $\angle 2 + \angle 4$

180°

$m\angle 1 = m\angle 5$   
 AIA

Same

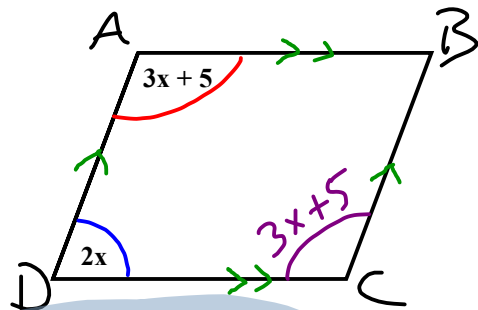
$m\angle 5 = m\angle 3$   
 C.A.

$m\angle 1 = m\angle 3$

Th<sup>m</sup> 5-5: The Sum of the Angles  
of any 2 consecutive Angles of  
a Parallelogram is equal to 180°.

Th<sup>m</sup> 5-6: Any 2 opposite Angles  
of a Parallelogram have the  
Same Measure

Parallelogram  
└─┬─> Rhombus  
└─┬─> Rectangles  
└─┬─> Squares



find x:

$\angle A$  &  $\angle D$  are  
 Con.  $\angle$ 's and  
 Con  $\angle$ 's equal  $180^\circ$

find  $m\angle C$

$\angle C$  &  $\angle A$   
 opp.  $\angle$ 's and  
 $m\angle C = m\angle A$

$$3x + 5 = m\angle C$$

$$\begin{aligned} 2x + 3x + 5 &= 180 \\ 5x + 5 &= 180 \\ \underline{-5 \quad -5} & \\ 5x &= 175 \end{aligned}$$

$$x = 35$$

$$\begin{aligned} \underline{3(35)} + 5 &= m\angle C \\ 105 + 5 &= m\angle C \end{aligned}$$

$$\underline{\underline{110^\circ = m\angle C}}$$

O.T.L.

① pg 166: Exp: 1-6(a)  
Written: 1, 3, 5, 7, 8