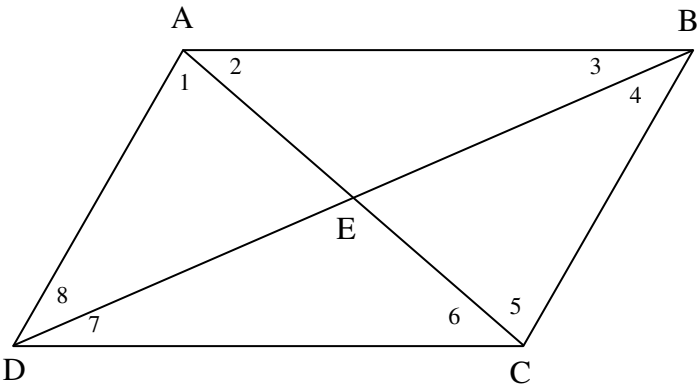
EXTRA PROBLEMS

(1) Given the figure to the right,
ABCD is a parallelogram.



(a) m∠ 1 = (9x + 3)°, m∠ 2 = (5x − 2)°
m∠ 6 = (3x + 11)°

Find: m∠ 5_____ , m∠ ADC_____

(b) DE = 5x − 4 , BD = 8x + 3

Find: x_____

(c) AD = 2x − 8 , AB = 3x + 2y , CD = 5x − y ,
BC = y + 5

Find: x_____ , y_____

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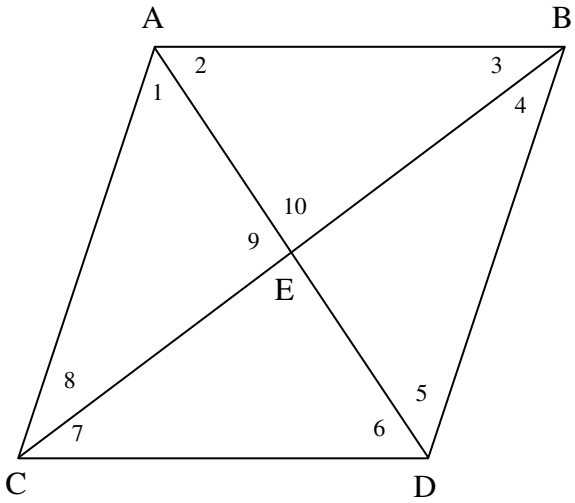
(2) Given the figure to the right,
ABCD is a rhombus, m∠ 1 = 54°

Find: the measures of the numbered angles



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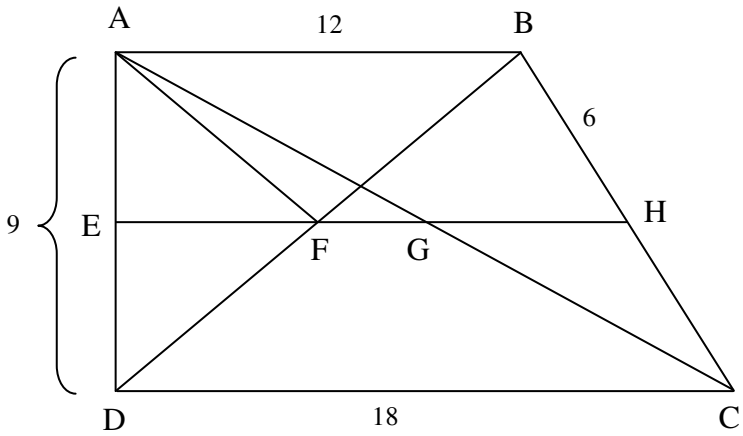
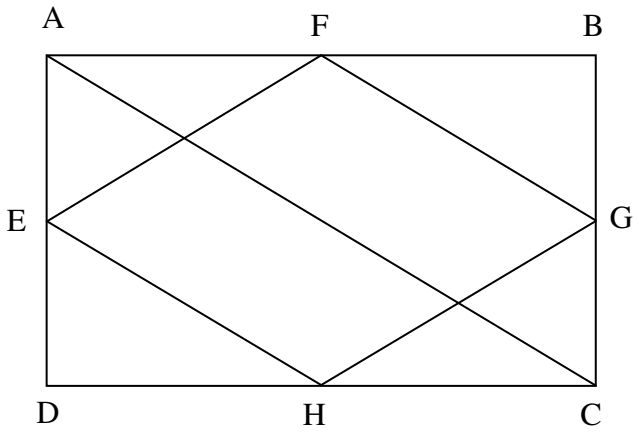
(3) Given the figure to the right,
$\overline{AB} \perp \overline{AD}$, $\overline{CD} \perp \overline{AD}$,
E and H are midpoints ,
AB = 12 , AD = 9 , CD = 18 ,
BH = 6 , BD = 15



Find: EF_____ , FG_____ , GH_____ , CH_____ , AF_____

(4) Given the figure to the right,
ABCD is a rectangle,
E , F , G , H are midpoints, AC = 12



Find: BD_____

Perimeter of EFGH_____

Answers:

1. a) angle 5= 61.5 angle ADC=88
   b) x= 5.5
   c) x=9 ¾ y=6.5

2. 1= 54 2=54 3=36 4=36 5=54 6=54 7=36 8=36 9=90 10=90

3. EF= 6 FG=3 GH=6 CH=6 AF=7.5

4. BD=12 Perimeter=24