Parallelograms Review:

Characteristics: Match each description with ***all*** the figure that fit it.

A. Diagonals bisect each other.

B. Diagonals are congruent.

C. Opposite sides are congruent.

D. Both diagonals bisect angles.

E. Diagonals are perpendicular.

F. Measures of interior angles sum to 360°.

G. Opposite angles are congruent.

H. Diagonals are perpendicular bisectors of each other.

I. All sides are congruent.

J. All angles are right angles.

Parallelogram: A, C, F, G

Rectangle: A, B, C, F, G, J

Rhombus: A, C, D, E, F, G, H, I

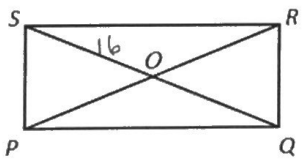
Square: A, B, C, D, E, F, G, H, I, J

1. *PQRS* is a **rectangle** and *OS* = 16.

   OQ = 16

   m∠QRS = 90°

   PR = 16+16 = 32

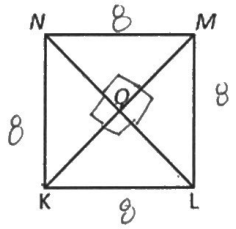


2. *KLMN* is a **square** and *NM* = 8.

   m∠OKL = 45°

   m∠MOL = 90°

   Perimeter *KLMN* = 32

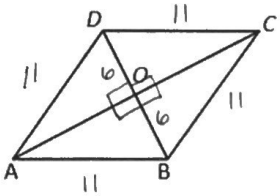


3. *ABCD* is a **rhombus**, *AD* = 11, and *DO* = 6.

   OB = 6

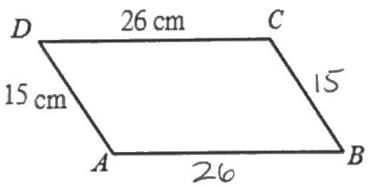
   BC = 11

   m∠AOD = 90°



In questions 4 - 10, ABCD is a parallelogram.

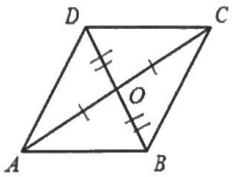
4. Find the Perimeter of ABCD.



82cm

5. *AO* = 11, and *BO* = 7

   AC = 22, *BD* = 14



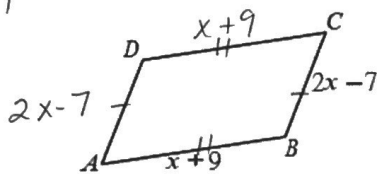
11 + 11 = 22

7 + 7 = 14

6. Perimeter $ABCD = 46$

$AB =$ 16, $BC =$ 7

7+9 2(7)-7



$2(2x-7)+2(x+9)=46$

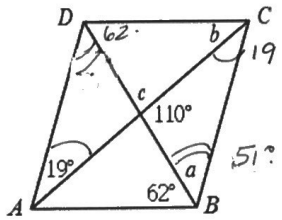
$4x-14+2x+18=46$

$6x+4=46$

$6x=42$ $x=7$

7. $a =$ 51°, $b =$ 48°,

$c =$ 70°



$19+110+a=180$

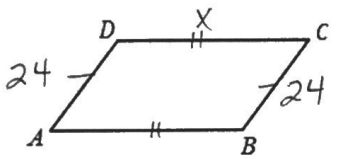
$a=51°$

$180-110=c$

$70+62+b=180$

8. Perimeter $ABCD = 119$, and

$BC = 24$. $AB =$ 35.5



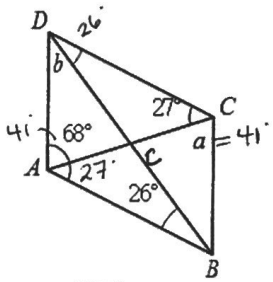
$2x+2(24)=119$

$2x=71$

$x=35.5$

9. $a =$ 41°, $b =$ 86°,

$c =$ 53°



$360-2(68)-2(26)=2b$

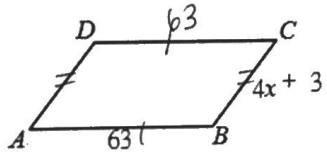
$\frac{172}{2}=\frac{2b}{2}$

$86=b$

$41+86+c=180$

$c=53°$

10. Perimeter $ABCD = 16x-12$. $AD =$ 4(18)+3 = 75



$2(4x+3)+2(63)=16x-12$

$8x+6+126=16x-12$

$8x+132=16x-12$

$+12 \quad +12$

$8x+144=16x$

$-8x \quad -8x$

$144=8x$

$18=x$