

1. a.) What is the sum of the exterior angles of a nonagon? 360°
b.) What is the sum of the interior angles of a nonagon? $180(9-2) = 1260^\circ$

- c.) What is the measure of each exterior angle of a regular nonagon?
 $\frac{360}{9} = 40^\circ$

- d.) What is the measure of each interior angle of a regular nonagon?
 $\frac{180(9-2)}{9} = \frac{1260}{9} = 140^\circ$

2. The sum of the interior angles of a polygon is 1260° . What is the number of sides in the polygon?

$$180(n-2) = 1260$$

$$n-2 = 7$$

$$n = 9$$

9 sides

3. An exterior angle on a regular polygon has a measure of 18° . How many sides does the polygon have?

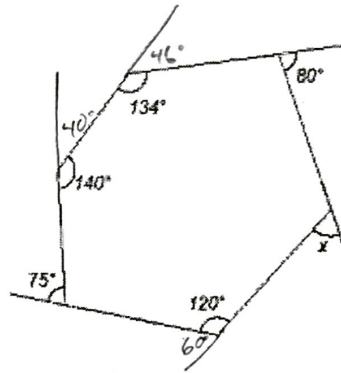
$$n = \frac{360}{18} = \boxed{20}$$

- 4.) Write an equation to find the value of x and solve.

$$x + 60 + 75 + 40 + 46 + 80 = 360$$

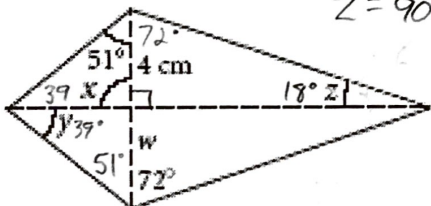
$$x + 301 = 360$$

$x = 59$



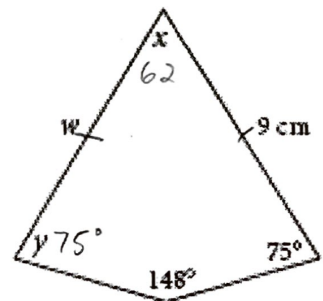
For Problems 5-8, find the lettered measures in each figure. The figures in Problems 5 and 6 are kites.

5. $w = 4$ $x = 90^\circ$
 $y = 39^\circ$ $z = 18^\circ$



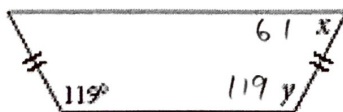
$$z = 90 - 72$$

6. $w = 9$
 $x = 62^\circ$
 $y = 75^\circ$



The figures in Problems 7 and 8 are isosceles trapezoids.

7. $x = 61^\circ$
 $y = 119^\circ$



8. Perimeter = 111 cm
 $x = 29$
 $2x + 53 = 111$
 $2x = 58$
 $x = 29$

