

**EDUCATIONAL ASSIGNMENT for JOSEPH JOHN WUNDERLICH** for 11th grade

This assignment covers the following Educational Objectives (Subjects marked with a "■" are the main subject, and those marked with an "□" are secondary subjects):

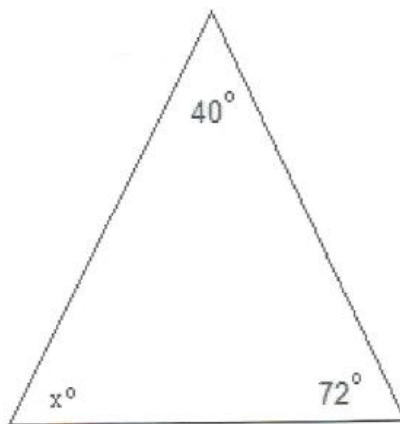
■ Geometry

**Solve the following problems. Use a pencil.**

1. If the degree measures of the three angles of a triangle are  $40^\circ$ ,  $z^\circ$ , and  $z^\circ$ , what is the value of  $z$ ?

- (A) 100  
 (B) 90  
 (C) 80  
 →(D) 70  
 (E) 60

$$\begin{array}{r} 180 \\ -40 \\ \hline 140 \div 2 = 70 \end{array}$$



2. In the triangle above,  $x =$

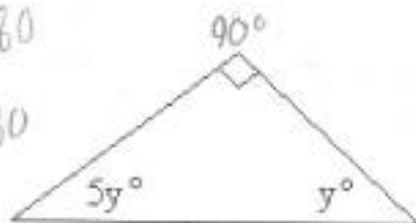
- (A) 62  
 (B) 64  
 (C) 66  
 →(D) 68  
 (E) 70

$$\begin{array}{r} 40 \\ +72 \\ \hline 112 \end{array} \quad \begin{array}{r} 2 \times 10 \\ 180 \\ -112 \\ \hline 68 \end{array}$$

$$90 + 5y + y = 180$$

$$90 + 6 \times 15 = 180$$

$$180 = 180$$



$$\begin{array}{r} 180 \\ - 90 \\ \hline 90 \\ \div 6 \\ \hline 15 \end{array}$$

Note: Figure not drawn to scale.

3. In the right triangle above, what is the value of  $y$ ?

- (A) 15  
(B) 18  
(C) 21  
(D) 30  
(E) 60

$$(18 - 5) + (18 + 8) = 78$$

$$13 + 26 = 39 \times 2 = 78$$



4. If the perimeter of the rectangle above is 78, what is the value of  $x$ ?

- (A) 20  
(B) 19  
→ (C) 18  
(D) 17  
(E) 16

a  $15 + 28 = 43 \times 2 = 86$

b  $14 + 27 = 41 \times 2 = 82$

→ c  $13 + 26 = 39 \times 2 = 78$

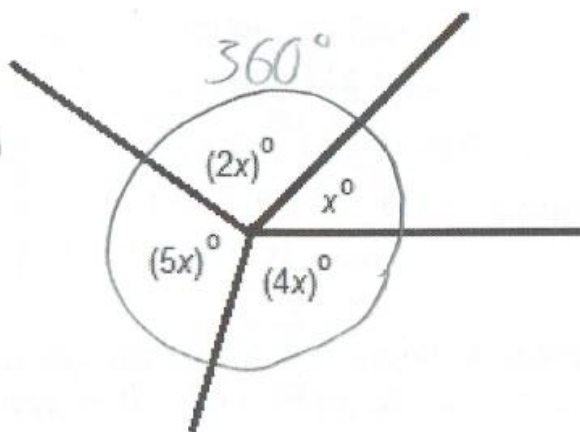
d  $12 + 25 = 37 \times 2 = 74$

e  $11 + 24 = 35 \times 2 = 70$

$$x + 2x + 4x + 5x = 360^\circ$$

$$12x = 360^\circ$$

$$12 \cdot 30 = 360^\circ$$



$$12 \overline{)360} \\ \underline{-36} \downarrow \\ 00$$

Note: Figure not drawn to scale.

5. In the figure above, four line segments meet at a point to form four angles. What is the value of  $x$ ?

- (A) 18  
(B) 24  
→ (C) 30  
(D) 40  
(E) 60