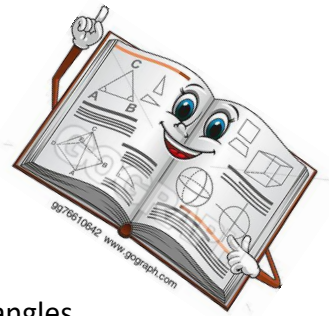




Grade 9 - Mathematics

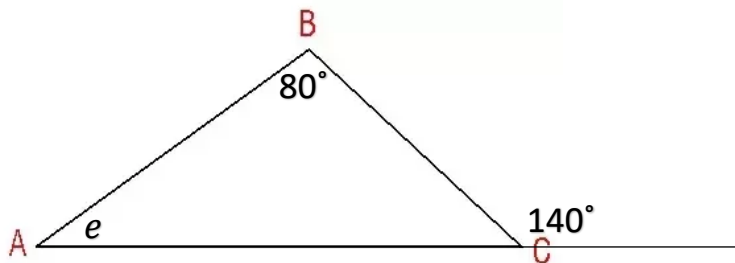
Properties of Geometric Figures 1

Memo



Examine the following triangles and calculate the value of the unknown angles

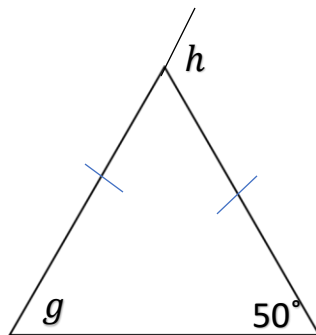
1.



Calculate the value of e .

$$e = 140^\circ - 80^\circ \text{ (external angle = sum of two interior opposite angles)}$$
$$= 40^\circ$$

2.



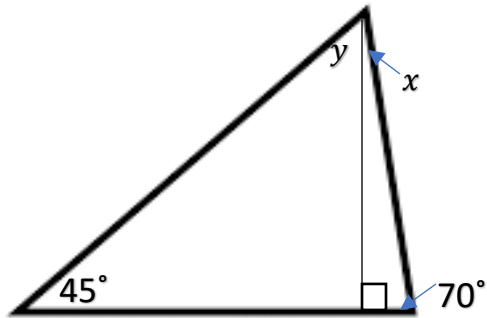
Calculate the value of g and h

$$g = 50^\circ \text{ (base angles of an isosceles triangle)}$$

$$h = 50^\circ + 50^\circ \text{ (external angles = sum of two opposite interior angles)}$$
$$= 100^\circ$$



3. Calculate the value of x and y



$$\begin{aligned}x &= 180^\circ - (70^\circ + 90^\circ) \text{ (Angles of a triangle = } 180^\circ\text{)} \\ &= 180^\circ - 160^\circ \\ &= 20^\circ\end{aligned}$$

$$\begin{aligned}y + x &= 180^\circ - (70^\circ + 45^\circ) \text{ (Angles of a triangle = } 180^\circ\text{)} \\ &= 180^\circ - 115^\circ \\ &= 65^\circ\end{aligned}$$

$$\begin{aligned}y &= 65^\circ - x \\ &= 65^\circ - 20^\circ \\ &= 45^\circ\end{aligned}$$