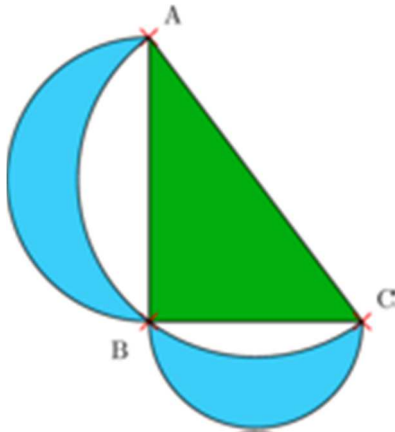


BACCALAURÉAT GÉNÉRAL ET TECHNOLOGIQUE
ÉPREUVE SPÉCIFIQUE DES SECTIONS EUROPÉENNES
MATHEMATIQUES – ANGLAIS

Corrigé 2

Thème : Geometry

a) b) Vocabulary : circle, circumcenter, midpoint, radius (radii) , compass, ruler (straight edge.)



c) A lune is a plane figure bounded by two circular arcs of unequal radii.

$$\text{Area } (\Gamma) = \frac{\pi(\frac{AC}{2})^2}{2} = \frac{\pi AC^2}{8}$$

$$\text{Area } (C_1) = \frac{\pi(\frac{AB}{2})^2}{2} = \frac{\pi AB^2}{8} \text{ and } \text{Area } (C_2) = \frac{\pi(\frac{BC}{2})^2}{2} = \frac{\pi BC^2}{8}$$

$$\begin{aligned} \text{Area } (L_{AB}) + \text{Area } (L_{BC}) &= \text{Area } (C_1) + \text{Area } (C_2) - \text{Area } (\Gamma) + \text{Area } (ABC) \\ &= \frac{\pi BC^2}{8} + \frac{\pi AB^2}{8} - \frac{\pi AC^2}{8} + \text{Area } (ABC) \end{aligned}$$

d) Thanks to the Pythagoras theorem : $BC^2 + AB^2 = AC^2$

$$\frac{\pi BC^2}{8} + \frac{\pi AB^2}{8} - \frac{\pi AC^2}{8} = 0$$

$$\text{Area } (L_{AB}) + \text{Area } (L_{BC}) = \text{Area } (ABC)$$