



$$\hat{A} \equiv \hat{B} \equiv \hat{C}$$

$$AB \equiv AC \equiv BC = 18$$

$$MC = 9 \text{ cm}$$

$$MC \perp \text{planul } (ABC)$$

$$MA = ?$$

$$MS = ?$$

$$MG = ?$$

Deci. $MC \perp \text{planul } (ABC)$

$$\Rightarrow MC \perp AC$$

$$AM = \sqrt{AC^2 + MC^2} = \sqrt{18^2 + 9^2} = 9\sqrt{5}$$

$$MC \perp CS.$$

CS mediană ($BS \equiv AS$)

\Rightarrow CS și înălțime

$$CS \perp AB.$$

$$MS = \sqrt{CS^2 + MC^2}$$

$$CS^2 = BC^2 - BS^2$$

$$\Rightarrow MS = \sqrt{BC^2 - BS^2 + MC^2} = \sqrt{18^2 - 9^2 + 9^2} = \sqrt{18^2} = 18$$

$$MG = \sqrt{MC^2 + GC^2} = \sqrt{9^2 + \left(\frac{2}{3} \cdot \sqrt{BC^2 - BS^2}\right)^2} = \sqrt{9^2 + \frac{4}{9}(18^2 - 9^2)}$$

$$GC = \frac{2}{3} \cdot CS = \frac{2}{3} \sqrt{BC^2 - BS^2} = \sqrt{18^2 - 9^2} = 3\sqrt{21}$$