



$$\cos \hat{BAC} = \cos \alpha = \frac{7}{25}$$

$$\tan \hat{ABC} = \tan \beta = \frac{4}{3}$$

$$CH = a$$

Det.: altre funzioni  
goniometriche di  
 $\alpha, \beta, \gamma$

$$\sin \alpha = \pm \sqrt{1 - \cos^2 \alpha} = \pm \sqrt{1 - \frac{49}{625}}$$

$$\sin \alpha = \pm \sqrt{\frac{576}{625}} \rightarrow \sin \alpha = \pm \frac{24}{25} \rightarrow \sin > 0 \rightarrow \sin \alpha = \frac{24}{25}$$

$$\tan \beta = \frac{4}{3} \rightarrow \tan \beta = \frac{\sin \beta}{\cos \beta} \Rightarrow \tan \beta = \frac{\sin \beta}{\sqrt{1 - \sin^2 \beta}}$$

$$\frac{\sin \beta}{\sqrt{1 - \sin^2 \beta}} = \frac{4}{3} \rightarrow \frac{\sin^2 \beta}{1 - \sin^2 \beta} = \frac{16}{9}$$

$$9 \sin^2 \beta = 16 - 16 \sin^2 \beta$$

$$25 \sin^2 \beta = 16 \rightarrow \sin \beta = \frac{4}{5}$$

$$\cos \beta = \sqrt{1 - \frac{16}{25}} \Rightarrow \cos \beta = \frac{3}{5}$$

$$\gamma = 180^\circ - (\alpha + \beta)$$

$$\sin \gamma = \sin [180 - (\alpha + \beta)] = \sin (\alpha + \beta)$$

$$\sin (\alpha + \beta) = \sin \alpha \cos \beta + \cos \alpha \sin \beta =$$

$$= \frac{24}{25} \cdot \frac{3}{5} + \frac{7}{25} \cdot \frac{4}{5} =$$

$$\frac{72}{125} + \frac{28}{125} = \frac{100}{125} = \frac{4}{5}$$

$$\sin \gamma = \frac{4}{5}$$

$$\cos \gamma = \pm \sqrt{1 - \sin^2 \gamma} = \pm \sqrt{1 - \frac{16}{25}} = \pm \sqrt{\frac{9}{25}}$$

$$= + \frac{3}{5}$$

$$a = AC \sin \alpha$$

$$AC = \frac{a}{\sin \alpha}$$

$$AC = a \cdot \frac{25}{24}$$

$$a = BC \sin \beta$$

$$BC = \frac{a}{\sin \beta}$$

$$BC = \frac{5}{4} a$$

$$AC = AB \Rightarrow AB = \frac{25}{24} a$$

$$AH = AC \sin \gamma$$

$$AH = \frac{25}{24} a \cdot \frac{4}{5} \Rightarrow AH = \frac{5}{6} a$$

$$CM = KB \Rightarrow KB = a$$