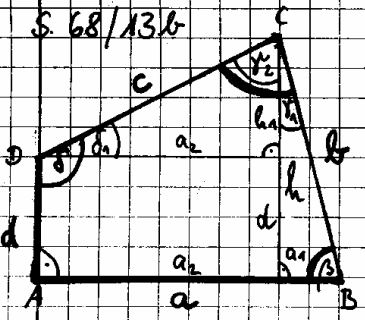
Sybille Wellmann
Mathematik Kl. R10B

S. 68/13b



gg.: $a = 9\,cm$
$b = 6{,}6\,cm$
$\beta = 75°$
$\gamma = 80°$

ges.: δ, c, d

h $\sin\beta = \frac{h}{b} \Rightarrow h = b \cdot \sin\beta = 6{,}6 \cdot \sin 75° \quad \underline{h = 6{,}38\,cm}$

γ_2 $\gamma_1 = 90° - \beta = 90° - 75° = 15°$

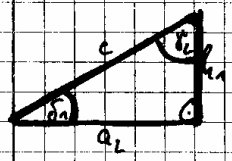
$\gamma_2 = \gamma - \gamma_1 = 80° - 15° = 65°$

δ $\delta = 360° - 90° - \beta - \gamma = \underline{115° = \delta}$

$\delta_1 = \delta - 90° = 115° - 90° = 25°$

a_1 $a_1^2 = b^2 - h^2 \quad a_1 = \sqrt{b^2 - h^2} \quad \underline{a_1 = 1{,}71\,cm}$

a_2 $a_2 = a - a_1 = 9 - 1{,}71 = \underline{7{,}29\,cm}$



$\cos\delta_1 = \frac{a_2}{c}$

$c = \frac{a_2}{\cos\delta_1} = \frac{7{,}29}{\cos 25°} \quad \underline{c = 8{,}04\,cm}$ (8,0 cm)

h_1 $h_1 = \sqrt{c^2 - a_2^2} = \sqrt{8{,}04^2 - 7{,}29^2} \quad \underline{h_1 = 3{,}40\,cm}$

d $d = h - h_1 = 6{,}38 - 3{,}4 \quad \underline{d = 2{,}98\,cm}$ (3,0 cm)