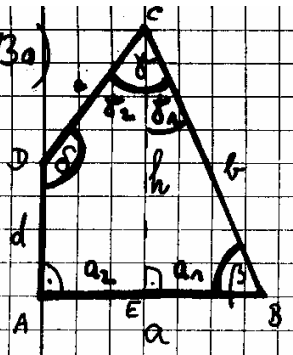
Sybille Wellmann
Mathematik Kl. R10B

S. 68/13a)



gg.: $a = 6\,cm$; $b = 9\,cm$; $d = 5\,cm$; $\beta = 72°$

ges.: c, γ, δ

Lös.: $\triangle EBC$

Ber. v. h:

$\sin\beta = \frac{h}{b}$

$h = b \cdot \sin\beta$

$h = 9 \cdot \sin 72°$

$\underline{h = 8,56\,cm}$

Ber. v. a_1:

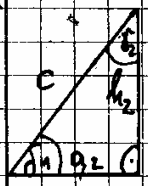
$b^2 = h^2 + (a_1)^2$

$a_1 = \sqrt{b^2 - h^2}$

$\underline{a_1 = 2,78\,cm}$

$\underline{a_2 = a - a_1 = 3,22\,cm}$

$(\underline{\gamma_1 = 90° - \beta = 18°})$



$h_2 = h - d$

$\underline{h_2 = 3,56\,cm}$

Ber. c:

$c^2 = h_2^2 + a_2^2$

$c = \sqrt{h_2^2 + a_2^2}$

$\underline{c = 4,80\,cm}$

Ber. v. δ:

$\tan\delta_1 = \frac{h_2}{a_2}$

$\tan\delta_1 = \frac{3,56}{3,22}$

$\delta_1 = 47,9°$

$\underline{\delta = 90° + \delta_1 = 137,9°}$

Ber. v. γ:

$\gamma = 360° - 90° - \beta - \delta$

$\underline{\gamma = 60,1°}$