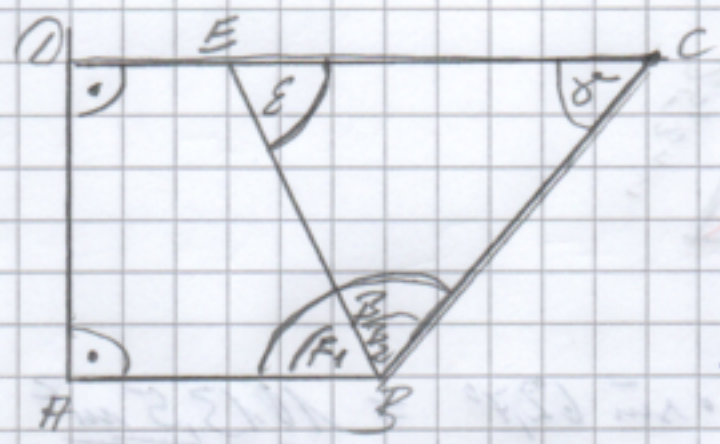
Ma 10 3. Woche Mathcad. Trigonometrie

1.1.1



Innenwinkelsumme $\square ABCD = 360°$

$\Rightarrow \beta = 360° - 2 \cdot 90° - 64°$

$\beta = 116°$

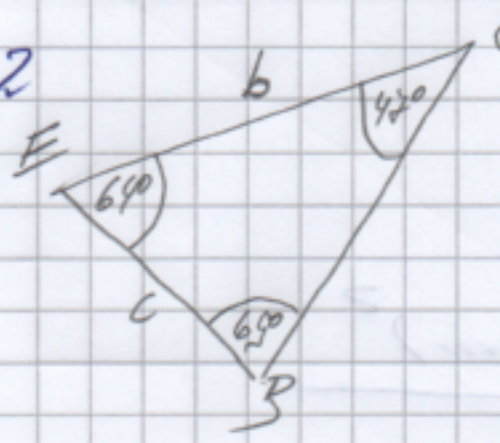
Innenwinkelsumme $\triangle BCE = 180°$

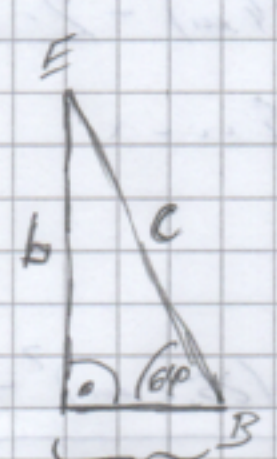
$\beta_2 = \beta - \beta_1 = 116° - 47° = \underline{\underline{69°}}$

$\varepsilon = 180° - 8° - \beta_2 = \underline{\underline{64°}}$

besser: Wechselw. am Geodr. Parallelen

1.1.2





$\overline{EB} - \overline{DE} = 6{,}1\,cm$

$\tan 64° = \frac{b}{6{,}1\,cm} \quad / \cdot 6{,}1\,cm$

$\underline{\underline{b = 12{,}5\,cm}}$

$c^2 = b^2 + (6{,}1\,cm)^2$

$= (12{,}5\,cm)^2 + (6{,}1\,cm)^2$

$= 193{,}46\,cm^2 \quad \sqrt{}$

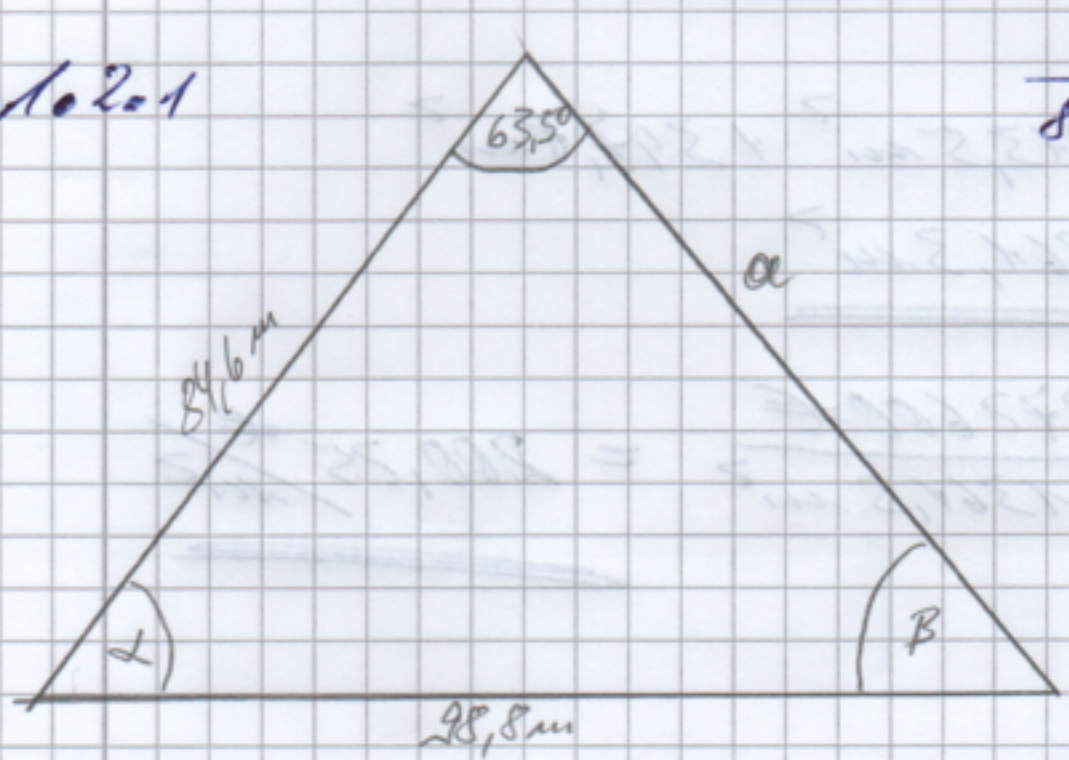
$\underline{\underline{c = 13{,}9\,cm}} = \overline{BE}$

$\frac{c}{\sin 47°} = \frac{b}{\sin 69°} \quad / \cdot \sin 69°$

$b = \frac{13{,}9\,cm \cdot \sin 69°}{\sin 47°}$

$\underline{\underline{= 17{,}7\,cm = \overline{EC}}}$

1.2.1



$\frac{\sin\beta}{84{,}6\,m} = \frac{\sin 63{,}5°}{98{,}8\,m} \quad / \cdot 84{,}6\,m$

$\sin\beta = 0{,}7663\,m$

$\underline{\underline{\beta = 50°}}$

$\underline{\underline{\alpha = 66{,}5°}}$

$A = \frac{1}{2} \cdot 98{,}8\,m \cdot 84{,}6\,m \cdot \sin 66{,}5°$

$= 3832{,}6\,m^2$

$\underline{\underline{\approx 3833\,m^2}}$

$\frac{a}{\sin 66{,}5°} = \frac{84{,}6\,m}{\sin 50°} \quad / \cdot \sin 66{,}5$

$a = 101{,}3\,m$

$\Rightarrow u = \underline{\underline{284{,}7\,m}}$