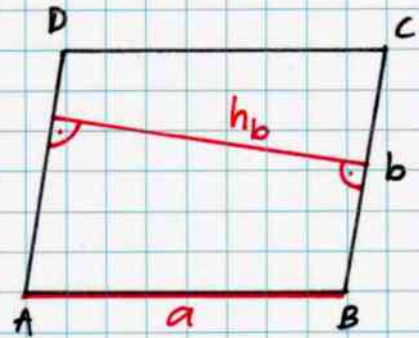


Lösungen Aufgaben MB1 LU 12

1. $A = b \cdot h_b$

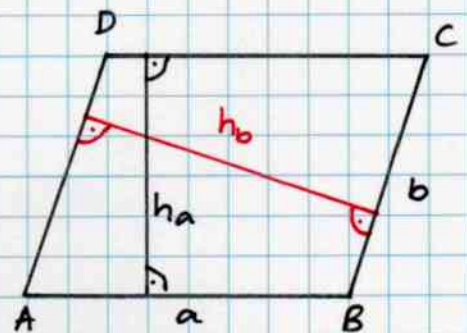
$$\begin{aligned}\Rightarrow b &= A : h_b \\ &= 0,8 \text{ m}^2 : 50 \text{ cm} \\ &= 0,8 \text{ m}^2 : 0,5 \text{ m} \\ &= \underline{\underline{1,6 \text{ m}}}\end{aligned}$$



$$\begin{aligned}\Rightarrow u &= 2 \cdot a + 2 \cdot b = 2 \cdot 8 \text{ dm} + 2 \cdot 1,6 \text{ m} \\ &= 16 \text{ dm} + 3,2 \text{ m} = 1,6 \text{ m} + 3,2 \text{ m} = \underline{\underline{4,8 \text{ m}}}\end{aligned}$$

2. $A = b \cdot h_b$

$$\begin{aligned}\Rightarrow b &= A : h_b \\ &= 9'600 \text{ m}^2 : 64 \text{ m} \\ &= \underline{\underline{150 \text{ m}}}\end{aligned}$$



$$u = 2 \cdot a + 2 \cdot b$$

$$\frac{u}{2} = a + b$$

$$\begin{aligned}\Rightarrow a &= \frac{u}{2} - b = \frac{540 \text{ m}}{2} - 150 \text{ m} \\ &= 270 \text{ m} - 150 \text{ m} = \underline{\underline{120 \text{ m}}}\end{aligned}$$

$$A = a \cdot h_a$$

$$\begin{aligned}\Rightarrow h_a &= A : a = 9'600 \text{ m}^2 : 120 \text{ m} \\ &= \underline{\underline{80 \text{ m}}}\end{aligned}$$

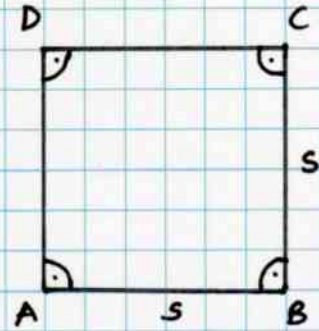
3.

$$u_Q = 4 \cdot s$$

$$\Rightarrow s = u : 4$$

$$= 36 \text{ cm} : 4 = \underline{9 \text{ cm}}$$

$$\Rightarrow A_Q = s^2 = (9 \text{ cm})^2 = \underline{81 \text{ cm}^2}$$

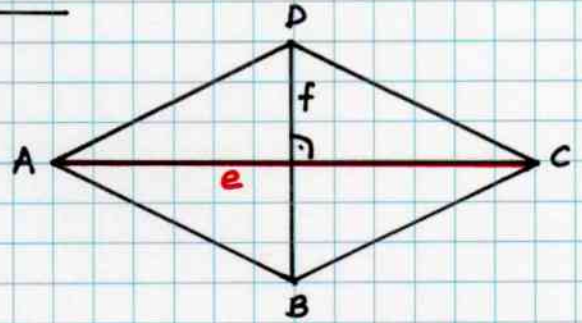


$$A_R = \frac{e \cdot f}{2}$$

$$\Rightarrow f = (2 \cdot A_R) : e$$

$$= (2 \cdot 81 \text{ cm}^2) : 20 \text{ cm}$$

$$= 162 \text{ cm}^2 : 20 \text{ cm} = \underline{\underline{8,1 \text{ cm}}}$$



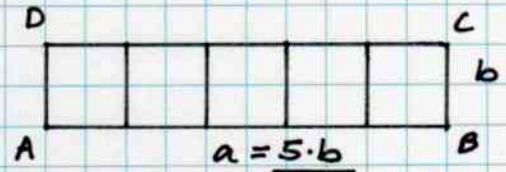
4.

$$u = 2 \cdot a + 2 \cdot b$$

$$= 2 \cdot 5 \cdot b + 2 \cdot b$$

$$= 10 \cdot b + 2 \cdot b$$

$$= \underline{12 \cdot b}$$



$$\Rightarrow b = u : 12 = 1,8 \text{ m} : 12 = \underline{0,15 \text{ m}}$$

$$\Rightarrow a = 5 \cdot b = 5 \cdot 0,15 \text{ m} = \underline{0,75 \text{ m}}$$

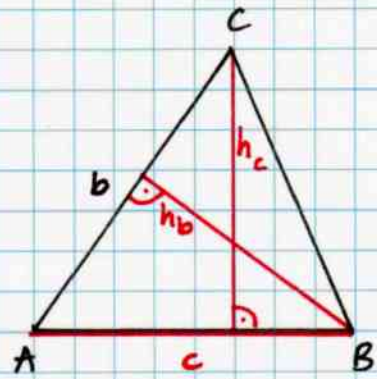
$$\Rightarrow A = a \cdot b = 0,75 \text{ m} \cdot 0,15 \text{ m}$$

$$= \underline{\underline{0,1125 \text{ m}^2}}$$

$$\begin{aligned} 5. \quad A &= \frac{c \cdot h_c}{2} = \frac{25\text{m} \cdot 8\text{m}}{2} \\ &= \frac{200\text{m}^2}{2} = \underline{100\text{m}^2} \end{aligned}$$

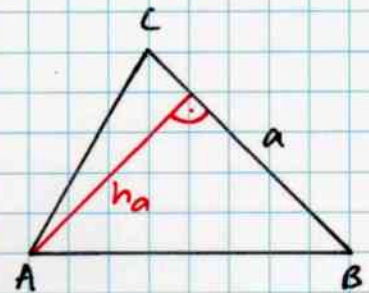
$$A = \frac{b \cdot h_b}{2}$$

$$\begin{aligned} \Rightarrow b &= (2 \cdot A) : h_b \\ &= (2 \cdot 100\text{m}^2) : 16\text{m} \\ &= 200\text{m}^2 : 16\text{m} = \underline{\underline{12,5\text{m}}} \end{aligned}$$



$$6. \quad A = \frac{a \cdot h_a}{2}$$

$$\begin{aligned} \Rightarrow a &= (2 \cdot A) : h_a \\ &= (2 \cdot 0,8\text{m}^2) : 5\text{dm} \\ &= 1,6\text{m}^2 : 5\text{dm} \\ &= 1,6\text{m}^2 : 0,5\text{m} \\ &= \underline{\underline{3,2\text{m}}} \end{aligned}$$

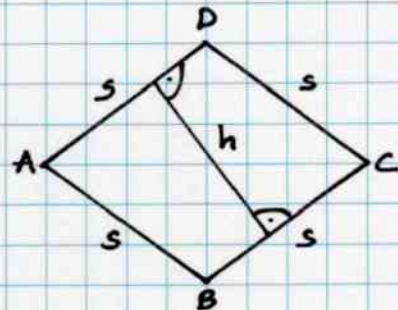


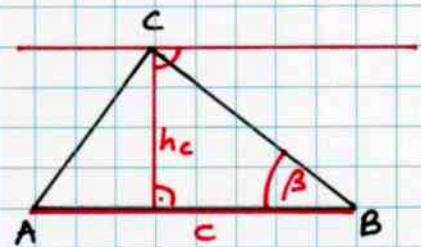
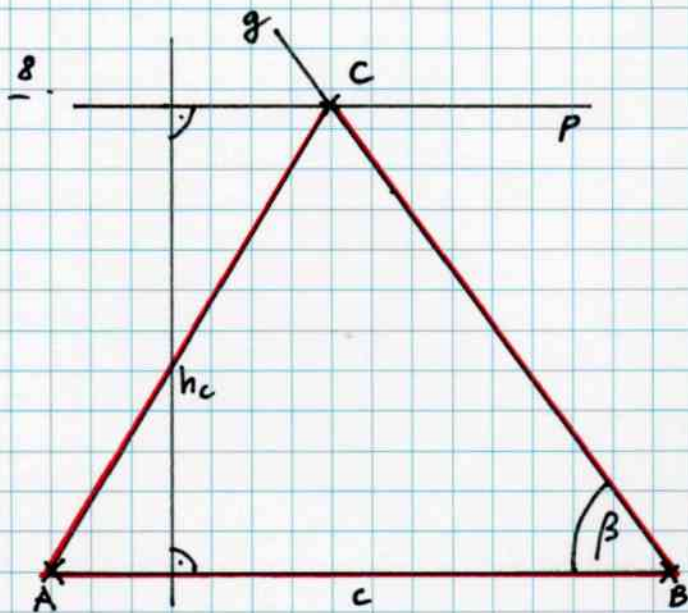
$$7. \quad u = 4 \cdot s$$

$$\begin{aligned} \Rightarrow s &= u : 4 = 5\text{dm} : 4 \\ &= \underline{\underline{1,25\text{dm}}} \end{aligned}$$

$$A = s \cdot h$$

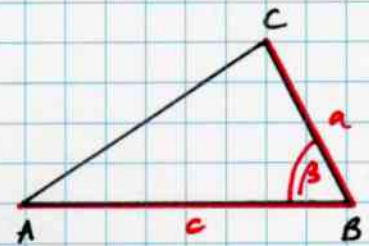
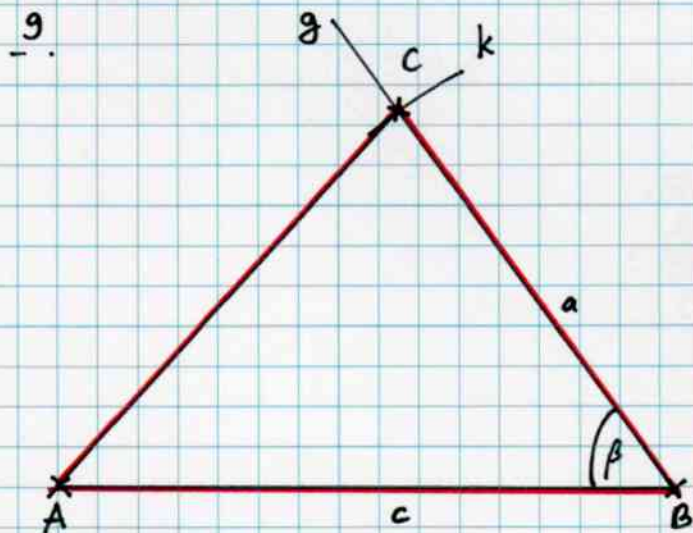
$$\begin{aligned} \Rightarrow h &= A : s = 50\text{cm}^2 : 1,25\text{dm} \\ &= 50\text{cm}^2 : 12,5\text{cm} = \underline{\underline{4\text{cm}}} \end{aligned}$$





Konstruktionsbericht:

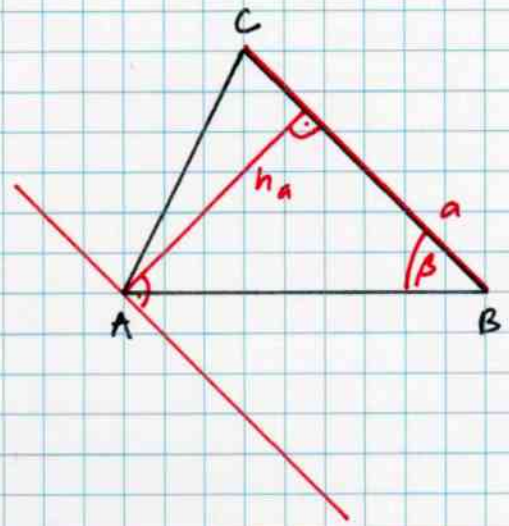
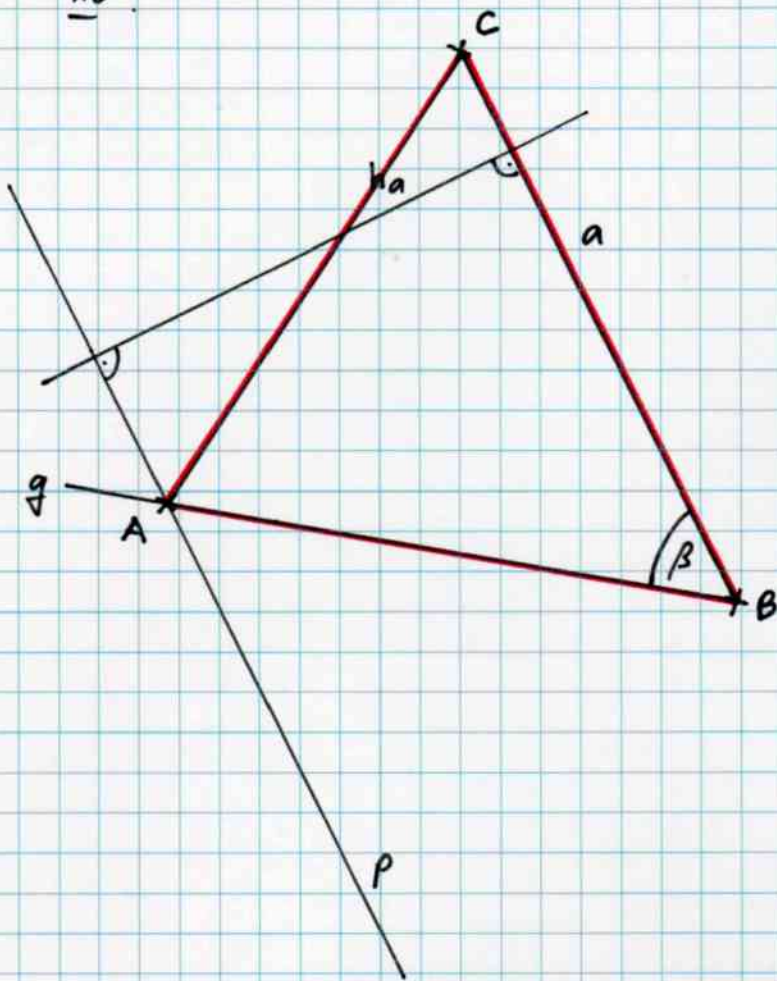
1. $c = \overline{AB}$
2. $p \parallel c$ im Abstand h_c
3. $\perp \beta$ in B an c $\rightarrow g$
4. $g \cap p = \{C\}$



Konstruktionsbericht:

1. $c = \overline{AB}$
2. $\perp \beta$ in B an c $\rightarrow g$
3. $k(B, a)$
4. $k \cap g = \{C\}$

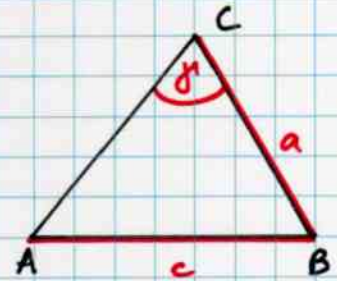
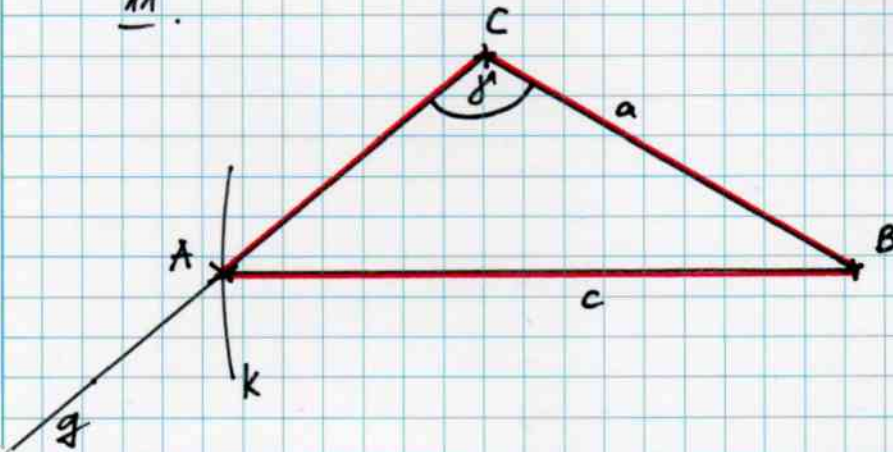
10.



Konstruktionsbericht:

1. $a = \overline{BC}$
2. $p \parallel a$ im Abstand h_a
3. $\angle \beta$ in B an $a \rightarrow g$
4. $g \cap p = \{A\}$

11.



Konstruktionsbericht:

1. $a = \overline{AC}$
2. $\angle \gamma$ in C an $a \rightarrow g$
3. $k(B, c)$
4. $k \cap g = \{A\}$

12.

