

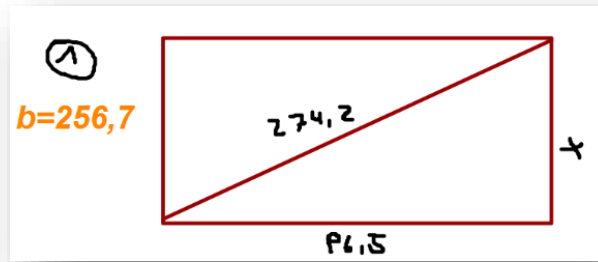
Lösung 1

$$b = \sqrt{d^2 - a^2}$$

$$b = \sqrt{2742^2 - 965^2}$$

$$b = \sqrt{65\,873,39}$$

$$b \approx 256,7 \text{ cm}$$



Lösung 2

$$c = 2 \cdot \sqrt{a^2 - h_c^2}$$

$$c = 2 \cdot \sqrt{65^2 - 6^2}$$

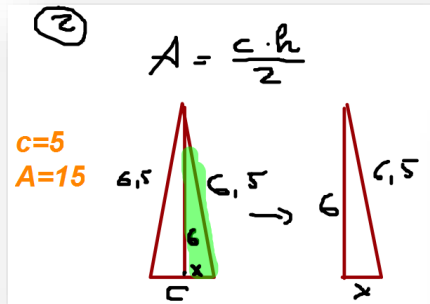
$$c = 2 \cdot \sqrt{625}$$

$$c = 5 \text{ cm}$$

$$A = \frac{c}{2} \cdot h_c$$

$$A = \frac{5}{2} \cdot 6$$

$$A = 15 \text{ cm}^2$$



Lösung 3

$$\frac{a-c}{2} = \sqrt{b^2 - h^2}$$

$$c = a - 2 \cdot \frac{a-c}{2}$$

$$c = 40 - 2 \cdot 5$$

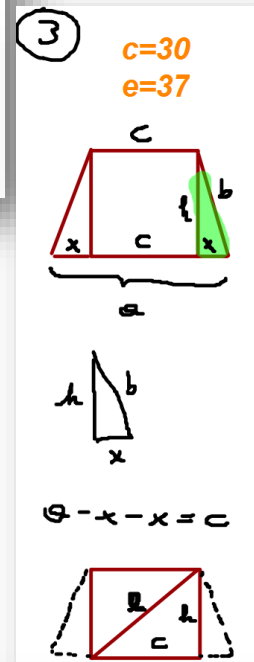
$$c = 30 \text{ cm}$$

$$e = \sqrt{h^2 + \left(\frac{a+c}{2}\right)^2}$$

$$e = \sqrt{12^2 + 35^2}$$

$$e = \sqrt{1369}$$

$$e = 37 \text{ cm}$$



Lösung 4

$$x = \sqrt{a^2 - \left(\frac{f}{2}\right)^2}$$

$$y = \sqrt{b^2 - \left(\frac{f}{2}\right)^2}$$

$$e = x + y$$

$$e = 141 \text{ mm}$$

$$x = \sqrt{53^2 - 28^2}$$

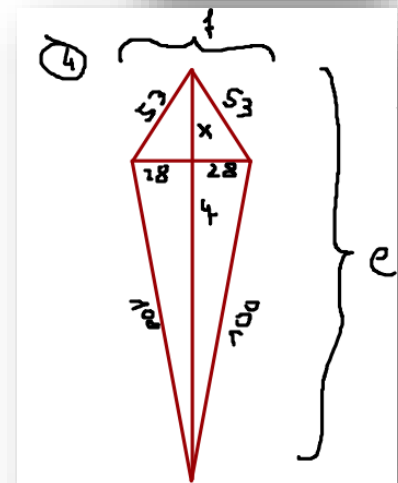
$$y = \sqrt{100^2 - 28^2}$$

$$x = \sqrt{2025}$$

$$y = \sqrt{9216}$$

$$x = 45 \text{ mm}$$

$$y = 96 \text{ mm}$$



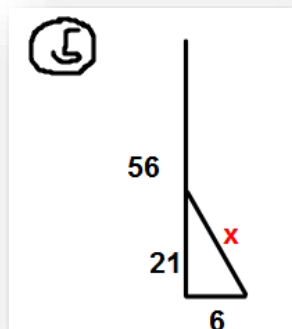
Lösung 5

$$c = \sqrt{a^2 + b^2}$$

$$c = \sqrt{21^2 + 6^2}$$

$$c = \sqrt{477}$$

$$c \approx 21,84 \text{ m}$$



Lösung 6

a) Alte Leitung: **506 m**

b) Neue Leitung: **395,4 m**

$$c = \sqrt{a^2 + b^2}$$

$$c = \sqrt{372^2 + 134^2}$$

$$c = \sqrt{156\,340}$$

$$c \approx 395,4 \text{ m}$$

c) Rohrsparnis: **110,6 m**

