

Lösung:

a)  $\overline{AM}^2 + \overline{BM}^2 = \overline{AB}^2 \Rightarrow \overline{AB} = \sqrt{5^2 + 3^2} \text{ cm} = 5,83 \text{ cm}$

b)  $\tan \epsilon = \frac{\overline{AS}}{\overline{AM}} = \frac{8}{5} \Rightarrow \epsilon = 57,99^\circ$

c)  $\overline{BS} = \sqrt{5,83^2 + 8^2} \text{ cm} = 9,90 \text{ cm}$

d)  $\cos \frac{\alpha}{2} = \frac{\overline{AM}}{\overline{AB}} \Rightarrow \frac{\alpha}{2} = \frac{5}{5,83} = 30,95^\circ \Rightarrow \alpha = 61,90^\circ$

e)  $\overline{MS} = \sqrt{8^2 + 5^2} \text{ cm} = 9,43 \text{ cm}$

f)  $A_{\text{Mantel}} = 2 \cdot \left( \frac{1}{2} \cdot 5,83 \cdot 8 \text{ cm}^2 \right) + \frac{1}{2} \cdot 6 \cdot 9,43 \text{ cm}^2 = 74,93 \text{ cm}^2$