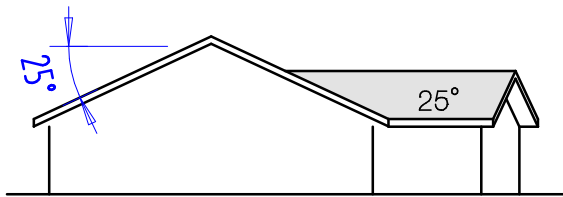
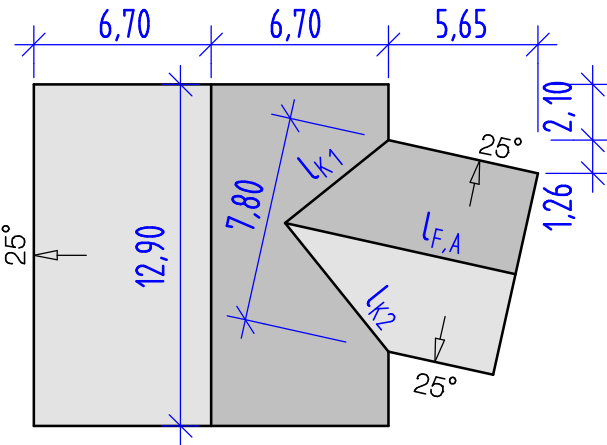


Berechnen Sie nachvollziehbar, mit aufgeschriebenen Ansätzen und Skizzen die gefragten Elemente

30 Satteldach mit schrägem Anbau, Dachneigung 25°. Ges.: First-, Kehlen- und Traufenlängen; Dachflächen.



Normalprofile:

$$g_H = 6,70\text{m} \quad g_A = 3,90\text{m}$$

$$h_F = 6,70 * \tan 25^\circ = \underline{\underline{3,124\text{m}}}$$

$$h_{F,A} = 3,90 * \tan 25^\circ = \underline{\underline{1,819\text{m}}}$$

Hausschräge:

$$\alpha_{sch} = \tan^{-1} \frac{1,26}{5,65} = \underline{\underline{12,572^\circ}}$$

$$l_{T1} = \frac{5,65}{\cos 12,578^\circ} = \underline{\underline{5,789\text{m}}}$$

$$l_{T2} = 5,789 - 7,80 * \tan 12,572^\circ = \underline{\underline{4,049\text{m}}}$$

$$l_{F,A} = \frac{5,789 + 4,049}{2} + \frac{3,90}{\cos 12,578^\circ} = \underline{\underline{8,915\text{m}}}$$

$$l_{F,A} = 8,915 + 12,90 = \underline{\underline{21,815\text{m}}}$$

$$g_{A,sch} = \frac{3,90}{\cos 12,578^\circ} = \underline{\underline{3,996\text{m}}}$$

$$y = 3,90 * \tan 12,572^\circ = \underline{\underline{0,870\text{m}}}$$

$$g_{K1} = \sqrt{3,90^2 + (3,996 - 0,87)^2} = \underline{\underline{4,998\text{m}}}$$

$$l_{K1} = \sqrt{4,998^2 + 1,819^2} = \underline{\underline{5,319\text{m}}}$$

$$g_{K2} = \sqrt{3,90^2 + (3,996 + 0,87)^2} = \underline{\underline{6,236\text{m}}}$$

$$l_{K2} = \sqrt{6,236^2 + 1,819^2} = \underline{\underline{6,496\text{m}}}$$

$$l_T = 12,90 * 2 - 3,996 * 2 + 5,789 + 4,049 = \underline{\underline{27,65\text{m}}}$$

Dachflächen:

$$A_{Grü} = 12,90 * 13,40 + \frac{5,789 + 4,049}{2} * 7,80 = \underline{\underline{211,23\text{m}^2}}$$

$$A_{sch} = \frac{211,23}{\cos 25^\circ} = \underline{\underline{233,06\text{m}^2}}$$