1. \( \dot{N}_{c} = 1,507 - 6 \cdot \cos \alpha \cdot 60 \cdot x = 1,507 - 3 \cdot x \)

\( V(x) = 13,67 + 6 \cdot \sin \alpha \cdot 60 \cdot x = 13,67 + 5,14 \cdot x \)

\( M(x) = 13,67 \cdot x - 2,598 \cdot x^2 \)

2. \( N_{e} = -F = -6,495 \, \text{kN} \)

\( V_{e} = \left( \frac{4}{5} \cdot 2 + 4 \right) \cdot \frac{2}{2} = 8,44 \, \text{kN} \)

\( M_{e} = -\frac{4}{5} \cdot 2 \cdot \frac{3}{2} - (4 - \frac{4}{5} \cdot 2) \cdot 2 \cdot \frac{3}{2} \cdot \frac{3}{2} = -6,14 \, \text{kNm} \)

3. \( \sin \theta = \frac{0,6}{1,3} \)

\( \cos \theta = \frac{1,3}{1,3} \)

\( N_{e6} = 8 \cdot \frac{0,6}{1,3} - 15 \cdot \frac{0,6}{1,3} = -9,47 \, \text{kN} \)

\( N_{e6} = -9,47 - 10 \cdot \frac{0,6}{1,3} = -18,29 \, \text{kN} \)

\( V_{e6} = -8 \cdot \frac{0,6}{1,3} - 15 \cdot \frac{0,6}{1,3} = -19,72 \, \text{kN} \)

\( V_{e6} = -19,72 - 10 \cdot \frac{0,6}{1,3} = -18,62 \, \text{kN} \)

\( M_{e6} = -8 \cdot 1,3 - 19,12 \cdot 0,68 - 6 = -266 \, \text{kNm} \)