

[Remarks:](#) See §6.4, page 231 and on

[Answers:](#)

- a. floors: 1134,4 kN
 column: 72,0 kN
 total: 1206,4 kN
- b. floors: 567,2 kN
 column: 72,0 kN
 total: 639,2 kN
- c. floors: 283,6 kN
 column: 72,0 kN
 total: 355,6 kN

[Remarks:](#)

weight 1 m² vloer: 6 kN
 dead load pro m²: 1,5 kN
 total pro m² floor: 7,5 kN
 weight of 1 m column: 6 kN

Centre column:

total floor surface: $5 \times (5,5 \text{ m}^2) = 151,25 \text{ m}^2$
 weight: $(151,25 \text{ m}^2)(7,5 \text{ kN/m}^2) = 1134,4 \text{ kN}$
 total column length:
 $\{(16,25 \text{ m}) - (3,25 \text{ m})\} - 4 \times (0,25 \text{ m}) = 12 \text{ m}$
 weight: $(12 \text{ m})(6 \text{ kN/m}) = 72 \text{ kN}$
 total weight: 1206,4 kN

Outer column:

Carries half of the floorsurface compared to the centre column

Corner column:

Carries a quarter of the floorsurface compared to the centre column