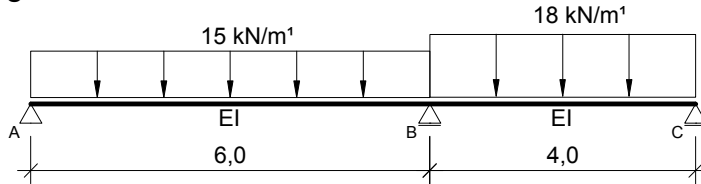


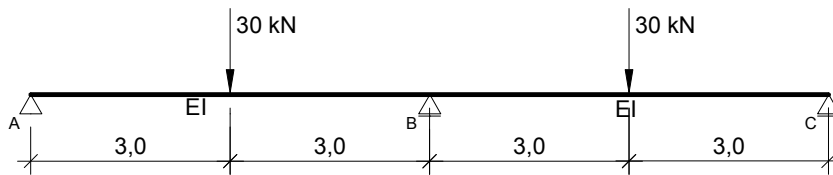
## Oefenopgaven week 4

Bepaal de krachtsverdeling en teken de D- en M-lijn voor de liggers van opgave 4.1 t/m 4.5

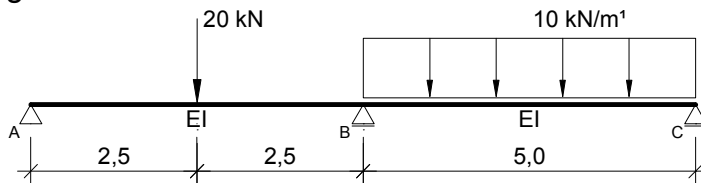
### Opgave 4.1



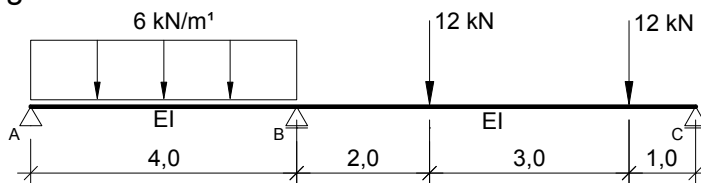
### Opgave 4.2



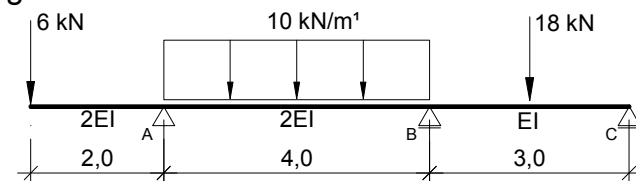
### Opgave 4.3



### Opgave 4.4



### Opgave 4.5



## Oefenopgaven week 4

### Opgave 4.1

$$\begin{aligned}D_A &= 35,85 \text{ kN} \\D_{BL} &= -54,15 \text{ kN} \\D_{BR} &= 49,73 \text{ kN} \\D_C &= -22,28 \text{ kN}\end{aligned}$$

$$\begin{aligned}M_{A-B} &= 42,84 \text{ kNm} \\M_B &= -54,90 \text{ kNm} \\M_{B-C} &= 13,78 \text{ kNm}\end{aligned}$$

### Opgave 4.2

$$\begin{aligned}D_A &= 9,38 \text{ kN} \\D_{BL} &= -20,63 \text{ kN} \\D_{BR} &= 20,63 \text{ kN} \\D_C &= -9,38 \text{ kN}\end{aligned}$$

$$\begin{aligned}M_{A-B} &= 28,13 \text{ kNm} \\M_B &= -33,75 \text{ kNm} \\M_{B-C} &= 28,13 \text{ kNm}\end{aligned}$$

### Opgave 4.3

$$\begin{aligned}D_A &= 5,00 \text{ kN} \\D_{BL} &= -15,00 \text{ kN} \\D_{BR} &= 30,00 \text{ kN} \\D_C &= -20,00 \text{ kN}\end{aligned}$$

$$\begin{aligned}M_{A-B} &= 12,50 \text{ kNm} \\M_B &= -25,00 \text{ kNm} \\M_{B-C} &= 20,00 \text{ kNm}\end{aligned}$$

### Opgave 4.4

$$\begin{aligned}D_A &= 7,92 \text{ kN} \\D_{BL} &= -16,07 \text{ kN} \\D_{BR} &= 12,72 \text{ kN} \\D_C &= -11,28 \text{ kN}\end{aligned}$$

$$\begin{aligned}M_{A-B} &= 5,23 \text{ kNm} \\M_B &= -16,30 \text{ kNm} \\M_{B-C} &= 11,28 \text{ kNm}\end{aligned}$$

### Opgave 4.5

$$\begin{aligned}D_{AL} &= -6,00 \text{ kN} \\D_{AR} &= 20,08 \text{ kN} \\D_{BL} &= -19,92 \text{ kN} \\D_{BR} &= 12,89 \text{ kN} \\D_C &= -5,11 \text{ kN}\end{aligned}$$

$$\begin{aligned}M_A &= -12,00 \text{ kNm} \\M_{A-B} &= 8,16 \text{ kNm} \\M_B &= -11,68 \text{ kNm} \\M_{B-C} &= 7,66 \text{ kNm}\end{aligned}$$