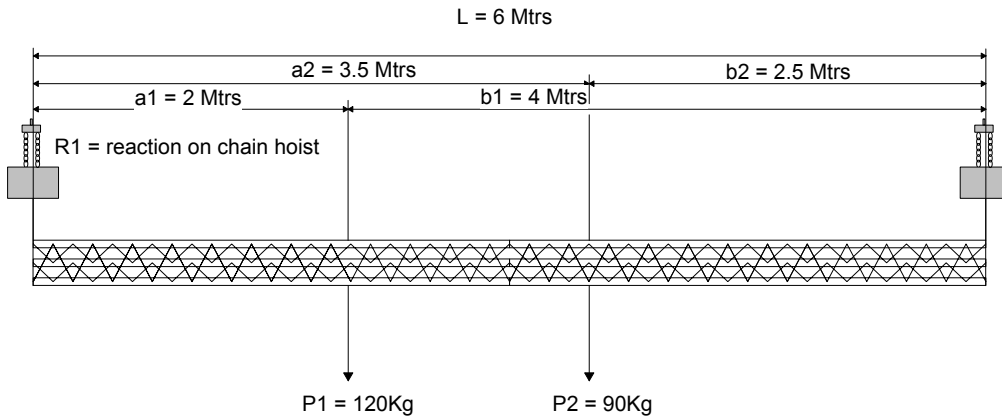


TRUSS LOADING CALCULATIONS



To calculate the load on the chainhoists ("end reactions") use the following formula:

$$R1 = \frac{(P1 \times b1)}{L} + \frac{(P2 \times b2)}{L} + \frac{(P3 \times b3)}{L} + \dots$$

$$R2 = \frac{(P1 \times a1)}{L} + \frac{(P2 \times a2)}{L} + \frac{(P3 \times a3)}{L} + \dots$$

In the above example, the two loads ("end reactions") are:

$$R1 = \frac{(120\text{Kg} \times 4\text{M})}{6\text{M}} + \frac{(90\text{Kg} \times 2.5\text{M})}{6\text{M}} = 117.5\text{Kg}$$

$$R2 = \frac{(120\text{Kg} \times 2\text{M})}{6\text{M}} + \frac{(90\text{Kg} \times 3.5\text{M})}{6\text{M}} = 92.5\text{Kg}$$

To calculate the TOTAL load on each hoist, we need to add half the self-weight of the truss to each hoist:

$$R1 = 117.5\text{Kg} + 10.5\text{Kg} = 128\text{Kg}$$

$$R2 = 92.5\text{Kg} + 10.5\text{Kg} = 103\text{Kg}$$

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