

Question

We will have next equations:

For the left end of the ladder:

$$R_{right} \cdot 3 = 850 \cdot 1.2 + 250 \cdot 1.5 + 40 \cdot 2.5 = 1020 + 375 + 100 = 1495(N \cdot m) \Rightarrow \\ \Rightarrow R_{right} = \frac{1495(N \cdot m)}{3(m)} = 498.3(N).$$

And for the sum of the forces at equilibrium:

$$R_{right} + R_{left} = 850 + 250 + 40 = 1140(N) \Rightarrow R_{left} = 1140(N) - 498.3(N) = 641.7(N).$$

Answer: 641.7(N).