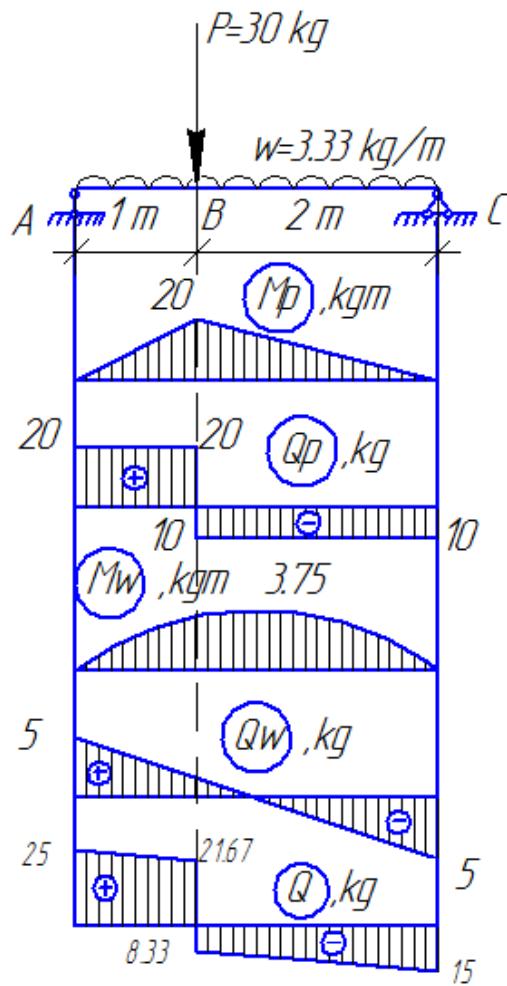


Task:

The 30kg boy stands on a horizontal plank 1m from one end and 2m from the other. The plank is uniform and has a mass of 10kg. Calculate the force.

Solution:



M_p – momentum diagram from external load

M_w – momentum diagram from dead load

Q_p – shear force diagram from external load

Q_w – shear force diagram from dead load

Q – shear force diagram from total load

$$[Q] = [1 \text{ kg}] = [9.80665 \text{ N}]$$