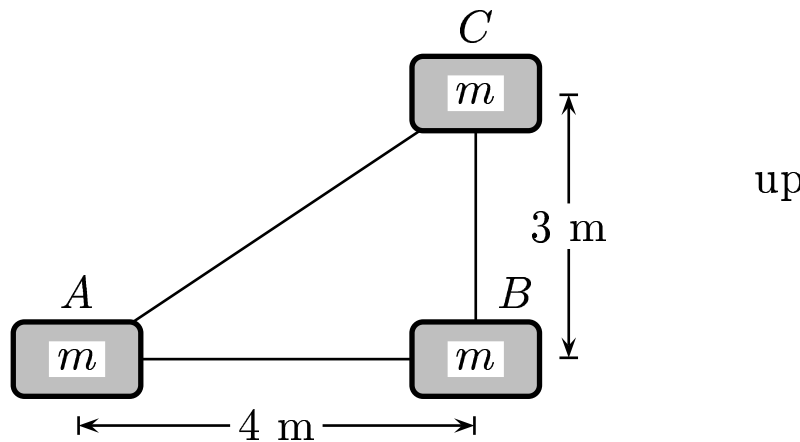


$Work = (Force\ parallel\ to\ displacement) (Displacement)$.

Consider the displacement of the block with $m = 1\text{ kg}$ from A to B and then to C , where $\overline{AB} = 4\text{ m}$ and $\overline{BC} = 3\text{ m}$. Let $g \approx 10\text{ m/s}^2$.



Which one is correct?

- A) $W_{AB} \approx 40\text{ J}$ and $W_{BC} = 0\text{ J}$.
- B) $W_{AB} = 0\text{ J}$ and $W_{BC} \approx 30\text{ J}$.
- C) $W_{AB} \approx 40\text{ J}$ and $W_{BC} \approx 30\text{ J}$.

Explanation: Note; From A to B there is no displacement parallel to the gravitational force.

So $W_{AB} = (mg)(0\text{ m}) = 0\text{ J}$. $W_{CB} = (mg)(3\text{ m}) \approx 30\text{ J}$.

Answer **B**.