Q 1 A light inextensible string that goes over a smooth fixed pulley as shown in the figure connects two blocks of masses 0.36 kg and 0.72 kg. Taking $g = 10\ m/s^2$, find the work done (in **joules**) by the string on the block of mass 0.36 kg during the first second after the system is released from rest.

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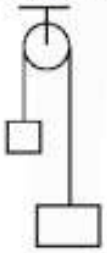

ans

Applying Newton's 2nd law,

2mg - T - 2ma

T - mg = ma

=> a = g/3

T = 4mg/3

W = Tension .Displacement = T . 1/2 at^2 = 8 Joules