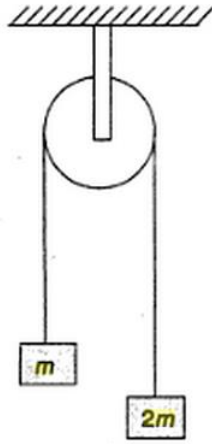


Answer on Question #55340-Physics-Other

Two masses m and $2m$ are joined to each other by means of a frictionless pulley as shown in figure. When the mass $2m$ is released, the mass m will ascend with an acceleration of..?

Solution



The net force acting on mass m is

$$(m + 2m)a = 2mg - mg.$$

Therefore, the acceleration of mass m is

$$a = \frac{mg}{3m} = \frac{g}{3}.$$