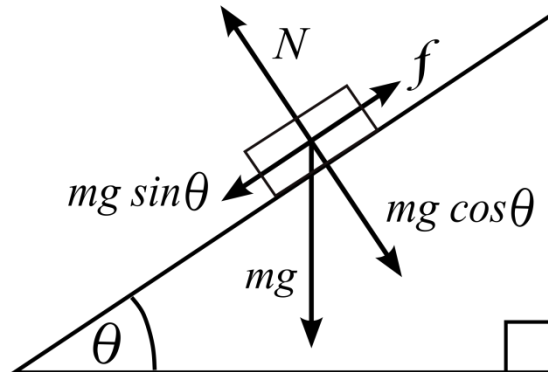


Answer on Question #56533-Physics-Mechanics-Relativity

A block of mass m is released on a smooth inclined plane of inclination θ with the horizontal the force exerted by the plane on the block has a magnitude

Solution



where N is Normal force that is perpendicular to the plane, $W = mg$, where m is mass, g is acceleration due to the gravity, and θ is Angle of inclination of the plane, f is friction force.

Plane is smooth, so $f = 0$.

The force exerted by the plane on the block is Normal force:

$$N = mg \cos \theta.$$

Answer: $mg \cos \theta$.