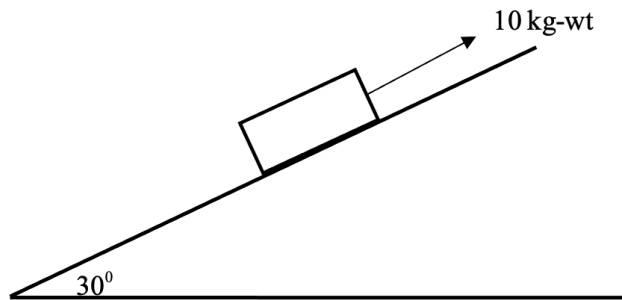


**Mathematics Questions by Topics**

Motion and Force

Question 31

Source: K11SM2Q17

**Question 31**

A box of mass 10 kg is at rest on a plane inclined at angle of  $30^\circ$  to the horizontal.  
A force of magnitude 10 kg-wt acting up and parallel to the plane is applied to the box.

For equilibrium to be maintained, the co-efficient of friction between the box and the plane must be

- A. at least  $\frac{\sqrt{3}}{3}$
- B. less than  $\frac{\sqrt{3}}{3}$
- C. at least  $\frac{g-2}{g\sqrt{3}}$
- D. less than  $\frac{g-2}{g\sqrt{3}}$
- E. at least  $5g\sqrt{3}$