

Mathematics Questions by Topics

Motion and Force

Question 37

Source: K10SM2Q21

Question 37



A box of mass 3 kg is on a horizontal plane. A force of magnitude F kg-wt acting at an angle of 30° to the horizontal is applied to the box.

The coefficient of friction between the box and the plane is $\frac{\sqrt{3}}{2}$.

Which of the following is true?

- A. If $F < 2g$ the box is not on the point of moving.
- B. If $F < 2g$ the box moves with constant velocity.
- C. If $F = 2$ the box moves with constant acceleration.
- D. If $F > 2$ the box moves with constant velocity.
- E. If $F > 2$ the box moves with constant acceleration.