

MOTION AND FORCES , H

A 10 N force is applied to a 6 kg box, as shown below.



Assume the system is frictionless.

- Determine the weight of the box in newtons. Show your calculations and include units in your answer.
- In your Student Answer Booklet, draw a force diagram for the box. Include labels and represent the relative magnitude of each force.
- Determine the acceleration of the box. Show your calculations and include units in your answer.

Now assume friction is introduced into the system.

- Describe one change to this system that would allow it to achieve the same acceleration as the frictionless system.