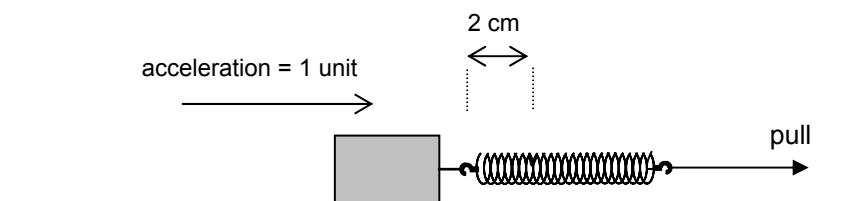


15

An astronaut tries out an experiment on Earth before setting off on a mission. He uses a spring to pull a block along a smooth level surface. As he pulls, he keeps the spring stretched by exactly 2 centimetres all the time. The block has an acceleration of 1 unit.



- (a) He then repeats this experiment in his spacecraft while it is in Earth orbit and everything is 'weightless'.

As before, he keeps the spring stretched by exactly 2 centimetres all the time. What will the acceleration of the block be now?

Tick ONE box (✓)

- More than 1 unit
- Exactly 1 unit again
- Less than 1 unit

- (b) How would you explain this?

Tick ONE box (✓)

- The box now has no weight.
- The mass of the box is the same as on Earth.
- In space, it takes a bigger force to make things move.