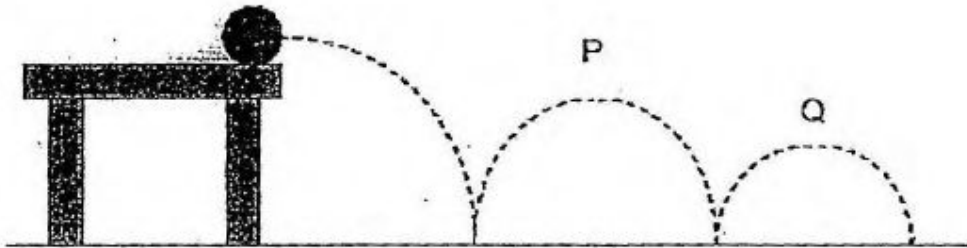


Energy

- 1) Peter conducted an experiment as shown in the diagram below. She released a ball from a table and recorded the maximum height reached by the ball when it rebounded at points P and Q. The path taken by the ball was represented by the dotted lines.



She recorded her results as shown in the table below.

Maximum height (cm) at	
P	Q
67	45

- a) Explain why the rebound height decreases after each bounce. [1]

- b) Suggest two ways and explain how he can make changes to the experiment such that the height of point P can be greater than 67 cm.

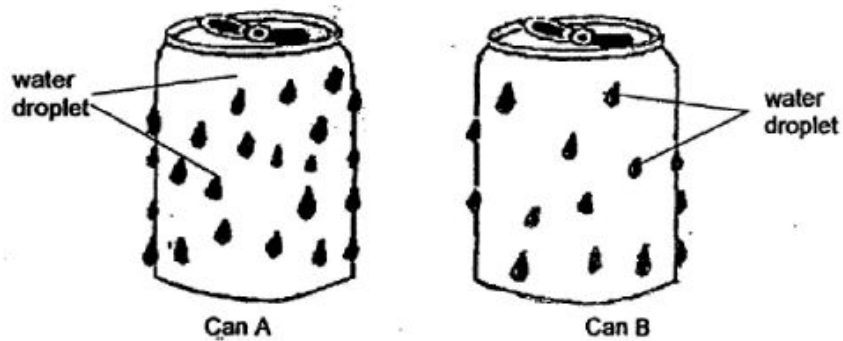
i) _____ [2]

- c) Explain why the ball comes to a halt after a few bounces on the ground. [1]

Water Cycle

2)

Two similar cans, A and B, contained equal amount of water. They were left on the kitchen table. Droplets of water were soon observed on the outside of the surface of both cans. The diagram below show the two cans with droplets of water outside.

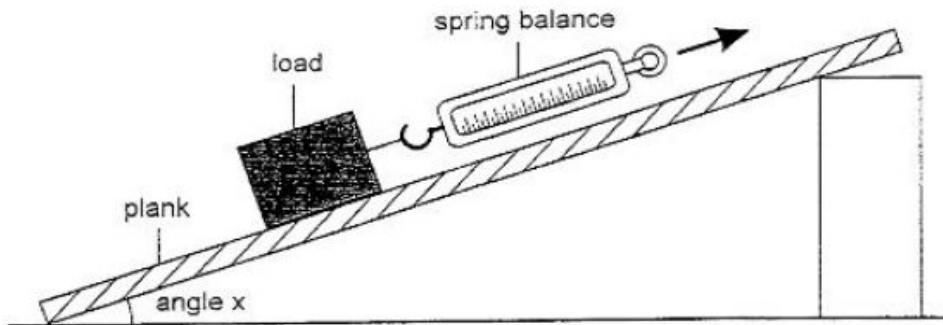


From the observation, explain why there are more water droplets on the surface of Can A than Can B. [2]

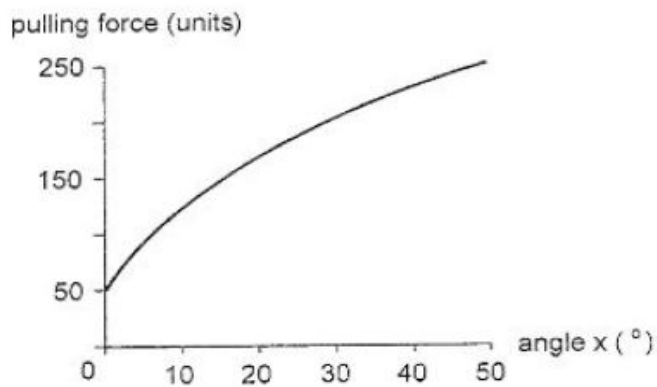
Forces

3)

Danny set up an experiment as shown below. He pulled the load up a plank using a spring balance. He repeated the experiment for different values of angle x .



The graph below shows the results of the experiment.



a) State how the pulling force changes with the angle x .

[1]

b) When the plank is horizontal, a force of 50 units is still needed to pull the load along the plank. Give a reason for this.

[2]

c) Explain why there is a larger pulling force when angle x increases.

[2]
