

Worksheet 10

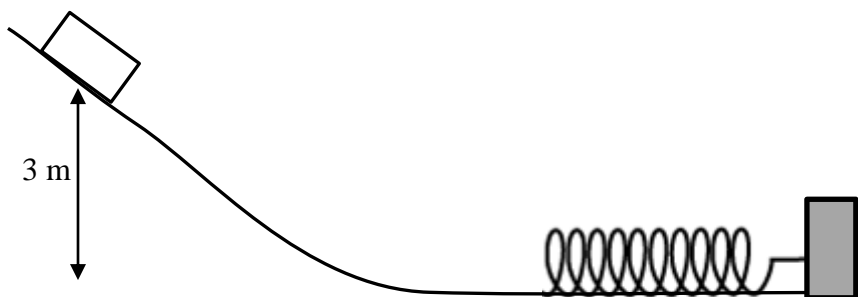
Year 12 Physics

Write the answers in your Exercise Book.

1. Greenhouse effect is one of the **most** widely discussed phenomena in recent times. Explain how the greenhouse effect is caused. (2 marks)
2. One of the consequences of the greenhouse effect and global warming is a rise in sea level. The driving force behind global warming has been an increase in greenhouse gases.

Name the **main** greenhouse gas. (1 mark)

3. A small metal block of mass 100g is heated in an oven to 80°C . It is then taken from the oven and immediately put in a calorimeter, which is insulated to prevent heat losses. The calorimeter contains 250 g of water at 20°C . The heat capacity of the calorimeter is negligible and the final temperature is 29°C . Calculate the specific heat capacity of the metal block. (Specific heat capacity of water is $4\,200\text{ J}^{\circ}\text{C}/\text{kg}$) (2 marks)
4. A 8 kg block is released from rest on a frictionless track as shown below.



The block travels down the track, hits the spring and compresses it 9 cm from its equilibrium position before coming to rest momentarily.

Calculate the spring constant. (2 marks)