

Density – 2022 Nov O Level 5054

1. Nov/2022/Paper_12/No.11

A student finds the density of an irregularly shaped object. He chooses his equipment from this list.

- 1 stop-watch
- 2 measuring cylinder
- 3 balance

Which equipment does the student need to use?

- A** 1, 2 and 3 **B** 1 and 2 only **C** 1 and 3 only **D** 2 and 3 only

2. Nov/2022/Paper_22/No.2(a)

The foundations that support a building are long concrete cylinders that are pointed at one end. A pile-driver is a machine that forces the pointed concrete cylinders into the ground.

Fig. 2.1 shows a pile-driver.

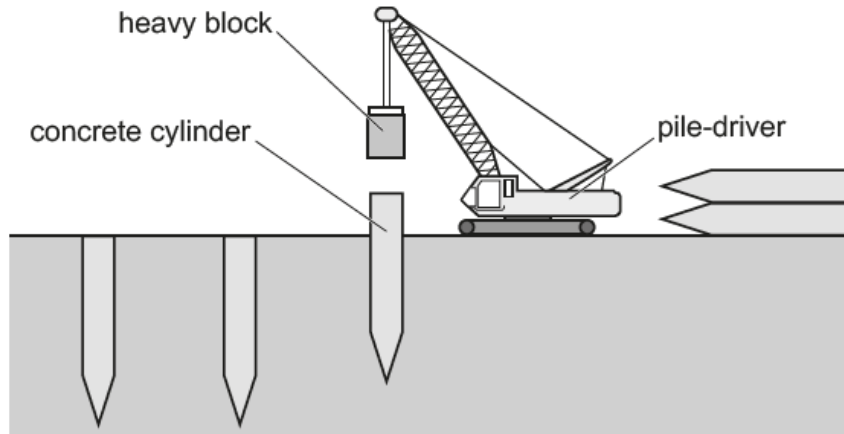


Fig. 2.1

A heavy block of mass 2.9×10^4 kg is lifted into the air then dropped onto the top of a concrete cylinder. This forces the cylinder into the ground.

(a) Fig. 2.2 shows the heavy block.

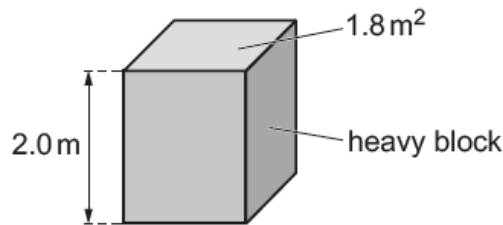


Fig. 2.2

The block is 2.0m tall and has a cross-sectional area of 1.8m^2 .

Calculate the density of the material used to make the block.

density = [2]