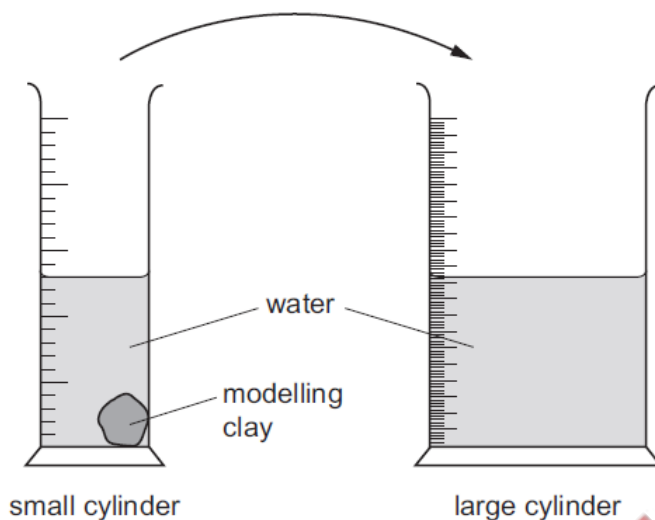# Physical Quantities – 2022 June IGCSE 0625

1. June/2022/Paper_11/No.1

A lump of modelling clay is moved from a small measuring cylinder to a large measuring cylinder that has twice the diameter.

The reading on the small measuring cylinder goes down by 20 cm^3.

By how much does the reading on the large cylinder go up?

A 10 cm^3 **B** 20 cm^3 **C** 40 cm^3 **D** 80 cm^3

2. June/2022/Paper_12/No.1

A lump of modelling clay is moved from a small measuring cylinder to a large measuring cylinder that has twice the diameter.
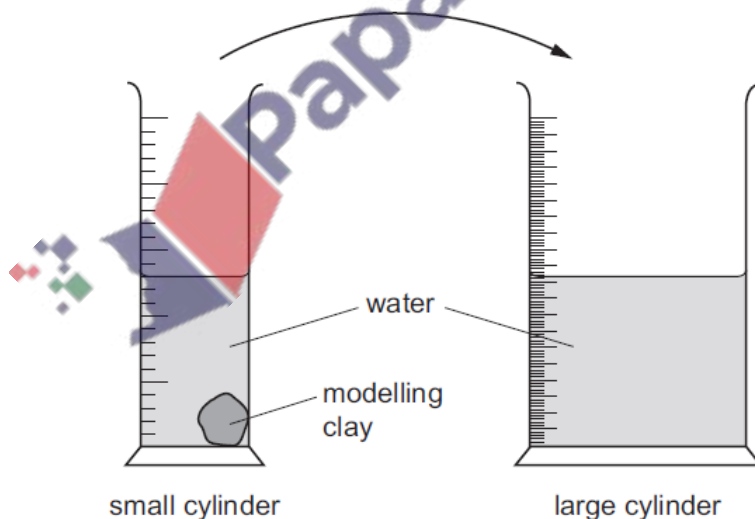

The reading on the small measuring cylinder goes down by 20 cm^3.

By how much does the reading on the large cylinder go up?

A 10 cm^3 **B** 20 cm^3 **C** 40 cm^3 **D** 80 cm^3

3. June/2022/Paper_13/No.1

A lump of modelling clay is moved from a small measuring cylinder to a large measuring cylinder that has twice the diameter.
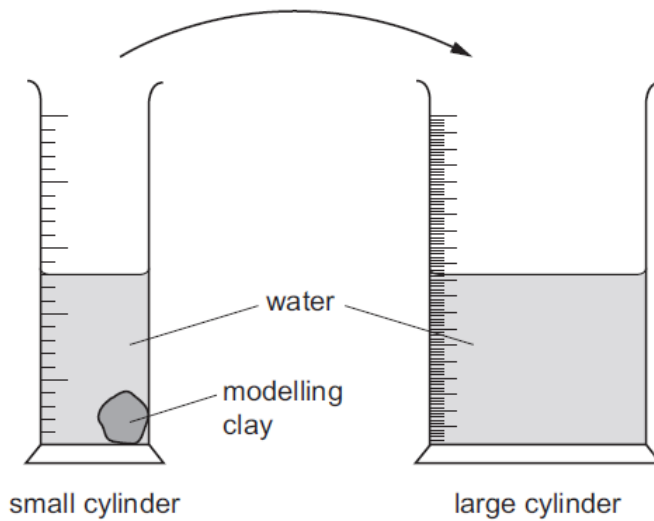

small cylinder   large cylinder

The reading on the small measuring cylinder goes down by $20\,\text{cm}^3$.

By how much does the reading on the large cylinder go up?

A $10\,\text{cm}^3$ **B** $20\,\text{cm}^3$ **C** $40\,\text{cm}^3$ **D** $80\,\text{cm}^3$

4. June/2022/Paper_21/No.1

Which measuring devices are most suitable for determining the length of a swimming pool and the thickness of aluminium foil?

	length of a swimming pool	thickness of aluminium foil
A	ruler	measuring cylinder
B	tape measure	micrometer screw gauge
C	tape measure	ruler
D	ruler	micrometer screw gauge

5. June/2022/Paper_22/No.1

Very small values of which quantity are measured using a micrometer screw gauge?

A   time

B   pressure

C   moment

D   distance

6.

What is a micrometer screw gauge used to measure?

A very small currents

B very small distances

C very small forces

D very small pressures

7.
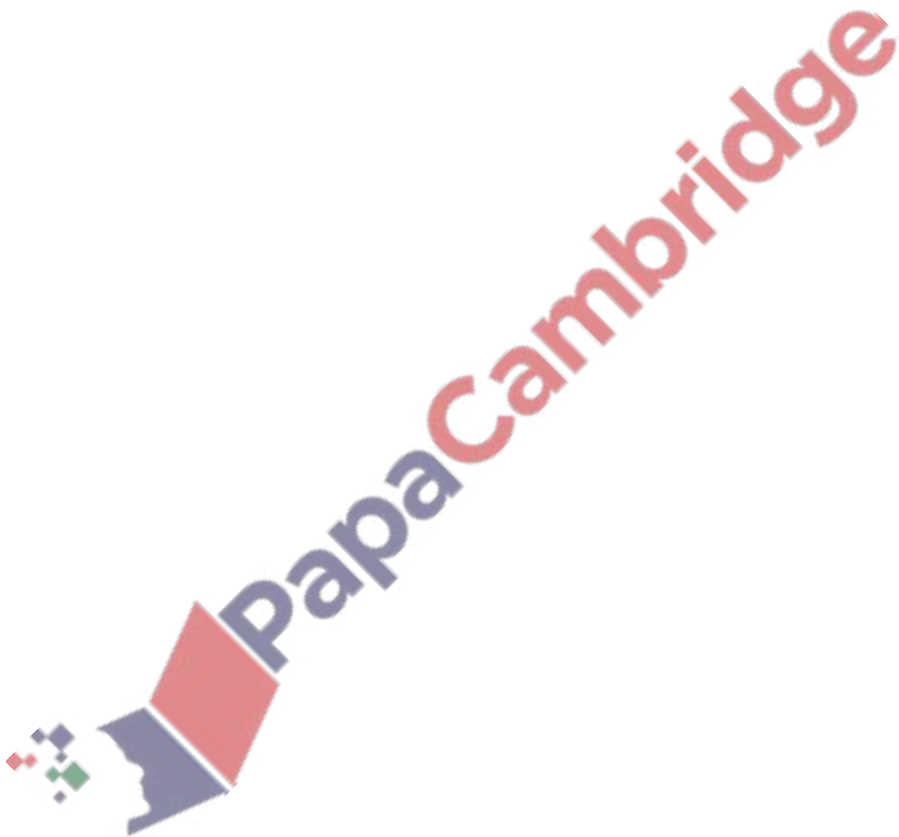
Fig. 1.1 shows a dripping tap and a measuring cylinder. The water drops all have the same volume. The drops fall from the tap at equal time intervals.
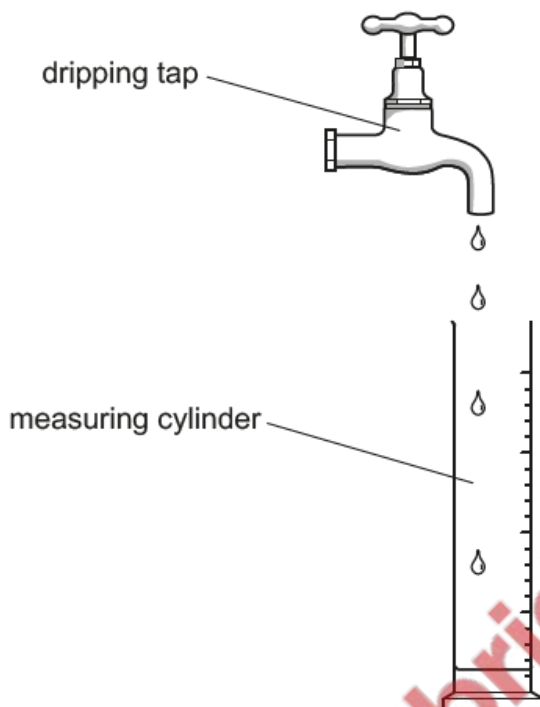
dripping tap

measuring cylinder

Fig. 1.1 (not to scale)

(a) (i) The student collects 200 of the drops in a measuring cylinder. The total volume collected is 60 cm^3.

Calculate the average volume of **one** drop of water.

volume = ... cm^3 [3]

(ii) Another student uses a stop-watch to measure the time taken for the tap to produce 200 drops. Fig. 1.2 shows the time reading on the stop-watch.

min   s $\frac{1}{100}$s

03:46.50

Fig. 1.2

4

Determine the time, in seconds, for the tap to produce 200 drops.

time = ... s [2]

(iii) Determine the average time interval between one drop starting to fall and the next drop starting to fall.

time interval = ... s [2]

(b) Fig. 1.3 shows the volume of water collected in the measuring cylinder by another student.
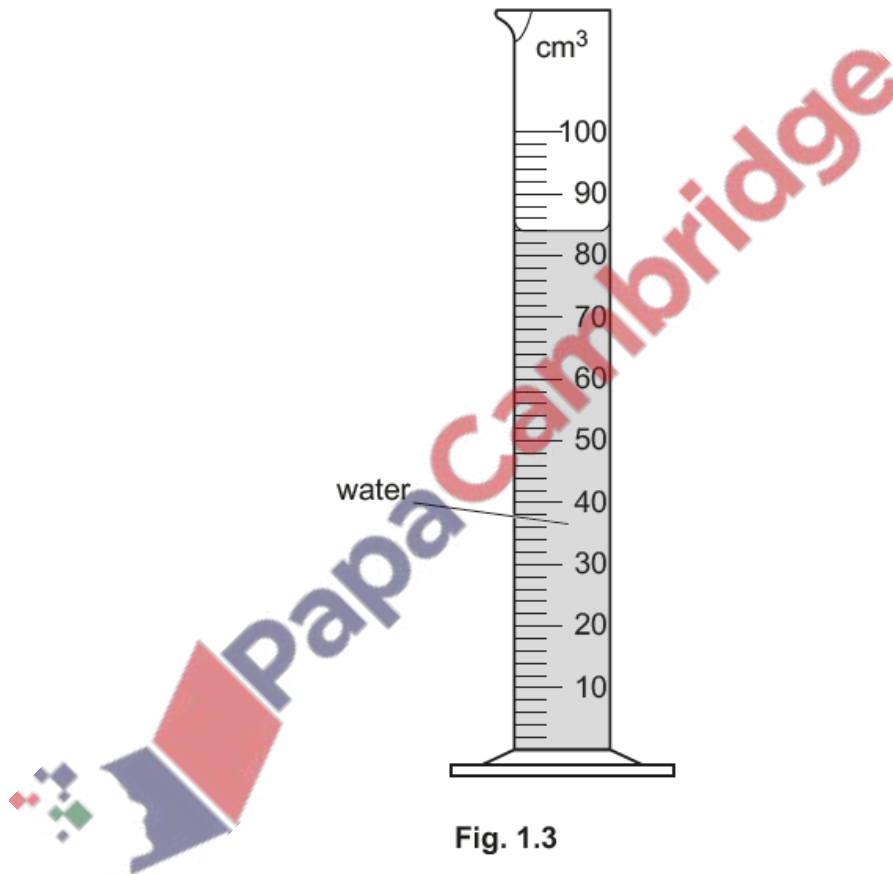
Fig. 1.3

Determine the volume of water in the measuring cylinder in Fig. 1.3.

volume = ... cm^3 [1]

[Total: 8]
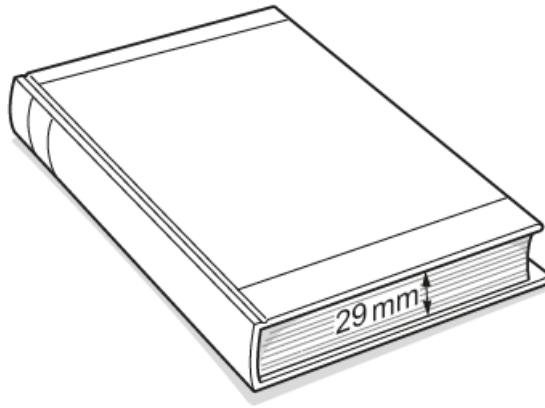
8.

Fig. 2.1 shows a closed textbook.

Fig. 2.1

(a) There are 270 sheets of paper in the textbook. The total thickness of the sheets is 29 mm.

Calculate the average thickness of **one** sheet of paper.

average thickness of one sheet = ... mm [3]