

Physical Quantities – 2019 June

1. 0625/11/M/J/19/No.1

A digital stop-clock measures time in minutes and seconds.

The stop-clock reads 00:50 when it is started (i.e. 00 minutes 50 seconds).

It reads 02:10 when it is stopped.

What is the shortest possible time that has elapsed between starting and stopping the stop-clock?

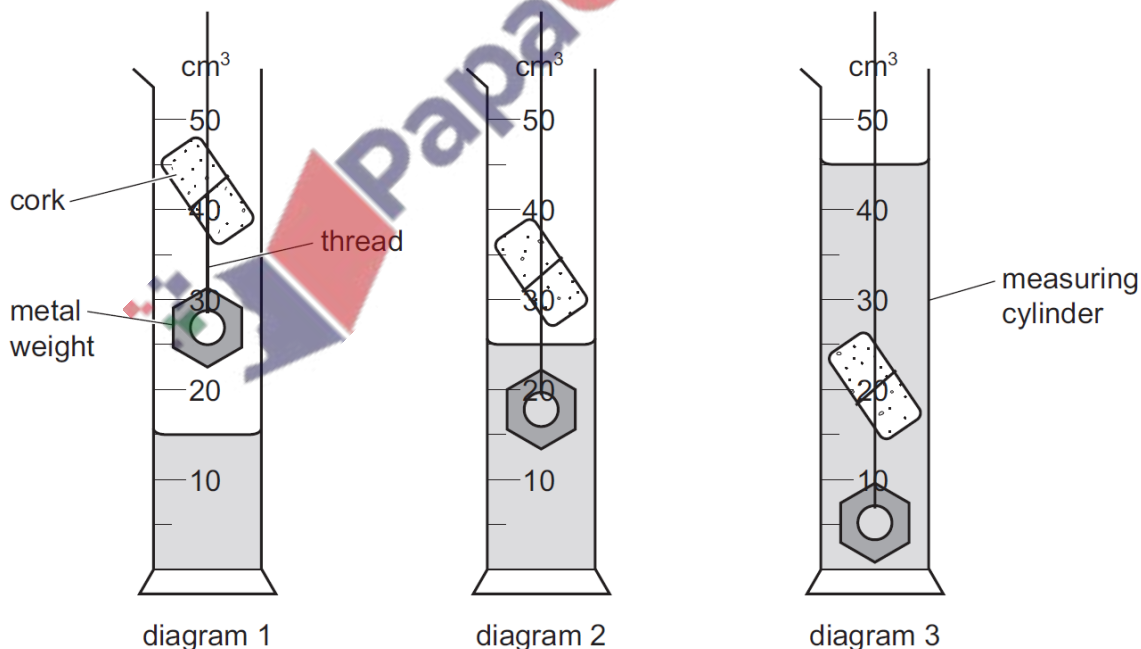
- A 1 minute 20 seconds
- B 2 minutes 00 seconds
- C 2 minutes 10 seconds
- D 3 minutes 00 seconds

2. 0625/12/M/J/19/No.1

Diagram 1 shows a measuring cylinder containing water. A metal weight with a cork attached by a thread is held above the water.

Diagram 2 shows the apparatus after the weight has been lowered into the water.

Diagram 3 shows the apparatus after the weight and the cork have been submerged.

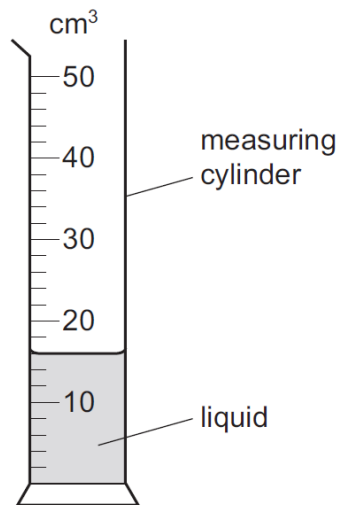


What is the volume of the cork?

- A 20 cm^3
- B 30 cm^3
- C 45 cm^3
- D 70 cm^3

3. 0625/13/M/J/19/No.1

The diagram shows a measuring cylinder containing liquid.



What is the reading for the volume of liquid in the cylinder?

- A** 13.0 cm^3 **B** 13.5 cm^3 **C** 16.0 cm^3 **D** 17.0 cm^3

4. 0625/21,22,23/M/J/19/No.1

Which quantity can be measured directly using a micrometer screw gauge?

- A** the area of a sheet of paper
B the mass of a sheet of paper
C the thickness of a sheet of paper
D the volume of a sheet of paper

5. 0625/12/F/M/19/No.1

Water drips from a tap into a measuring cylinder.

The table shows the volume of water in the cylinder every minute for four minutes.

| time / minutes | volume of water / cm ³ |
|----------------|-----------------------------------|
| 0 | 0 |
| 1.0 | 27 |
| 2.0 | 57 |
| 3.0 | 83 |
| 4.0 | 112 |

What is the average volume of water collected in the cylinder each minute?

- A 22 cm³ B 28 cm³ C 56 cm³ D 57 cm³

6. 0625/22/F/M/19/No.1

Which row shows the best choice of measuring instruments to obtain accurate values for the distances shown?

| | diameter of wire | height of bench | length of laboratory |
|---|------------------------|------------------------|------------------------|
| A | measuring tape | measuring tape | micrometer screw gauge |
| B | metre rule | micrometer screw gauge | measuring tape |
| C | micrometer screw gauge | measuring tape | metre rule |
| D | micrometer screw gauge | metre rule | measuring tape |