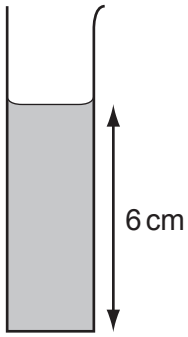
MEASURING VOLUME

1 Some water is poured into four tubes of different cross-sectional areas.

Which tube contains the largest volume of water?

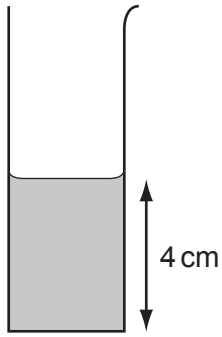
A

area = 10 cm^2



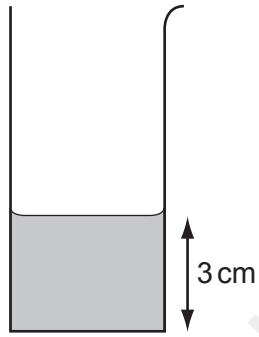
B

area = 20 cm^2



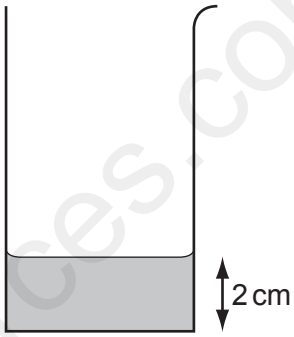
C

area = 30 cm^2



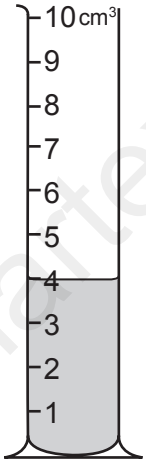
D

area = 40 cm^2

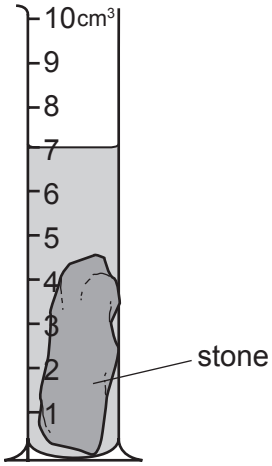


2 The diagrams show an experiment to determine the volume of a stone.

without stone



with stone



What is the volume of the stone?

A 3 cm^3 **B** 4 cm^3 **C** 7 cm^3 **D** 11 cm^3

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3 Diagram 1 shows a measuring cylinder containing water.

Five identical steel balls are now lowered into the measuring cylinder. Diagram 2 shows the new water level in the cylinder.

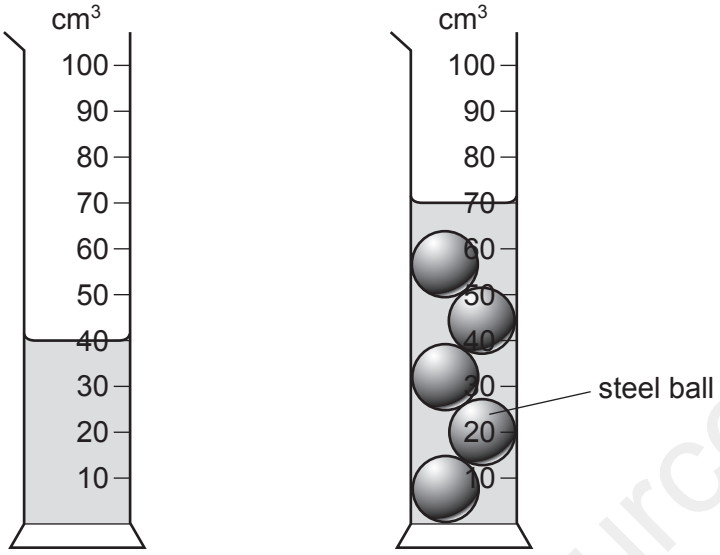
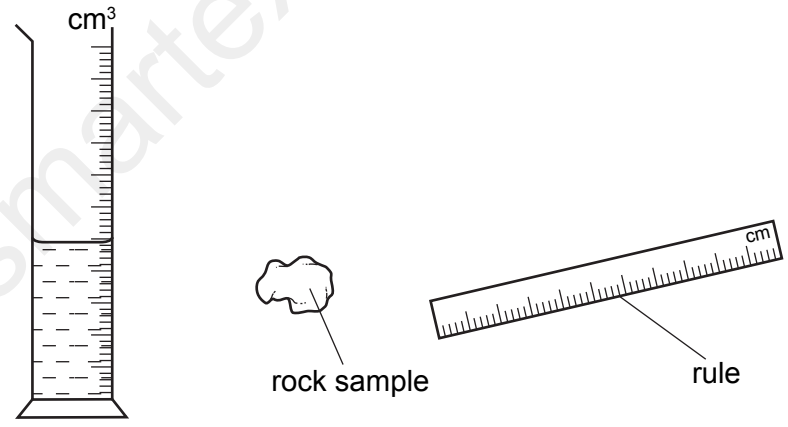


diagram 1 diagram 2

What is the volume of each steel ball?

A 6 cm^3 **B** 14 cm^3 **C** 30 cm^3 **D** 70 cm^3

4 A scientist needs to determine the volume of a small, irregularly shaped rock sample. Only a rule and a measuring cylinder, partially filled with water, are available.



measuring cylinder

To determine the volume, which apparatus should the scientist use?

A both the measuring cylinder and the rule

B neither the measuring cylinder nor the rule

C the measuring cylinder only

D the rule only

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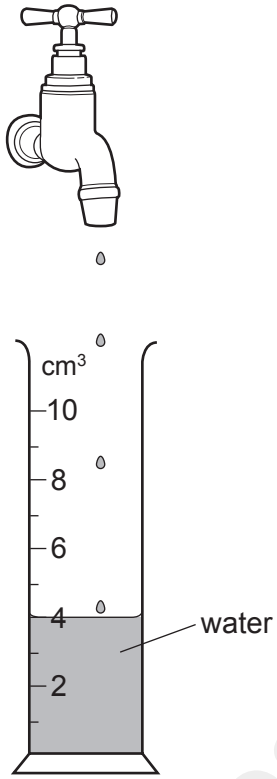
5 Drops of water are dripping steadily from a tap (faucet). The diagram shows a measuring cylinder which has collected 120 drops of water.



How many drops in total will have been collected when the measuring cylinder reads 10 cm^3?

A 48 **B** 60 **C** 180 **D** 300

6 A stone has a volume of 0.50 cm^3 and a mass of 2.0 g.

What is the density of the stone?

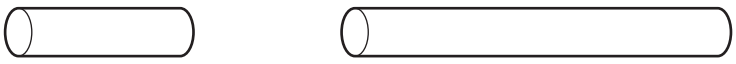
A 0.25 g/cm^3

B 1.5 g/cm^3

C 2.5 g/cm^3

D 4.0 g/cm^3

7 Two cylinders are made of the same metal. Both cylinders have the same cross-sectional area but one is longer than the other.



cylinder 1 cylinder 2

Which quantity is the same for both cylinders?

A density

B mass

C resistance

D volume

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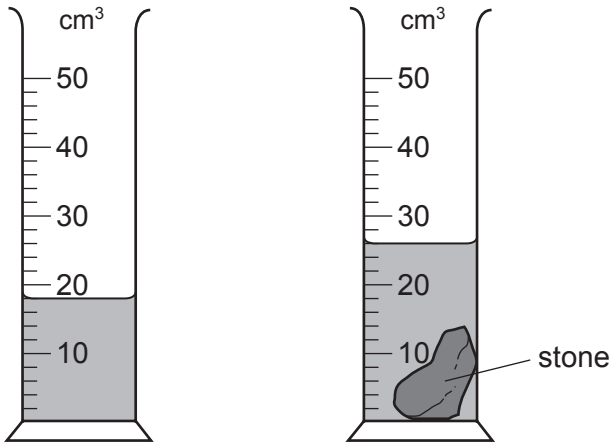
8 The diagram shows a measuring cylinder used to measure the volume of a small stone.



What is the volume of the stone?

A 8 cm^3 **B** 9 cm^3 **C** 14 cm^3 **D** 26 cm^3

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