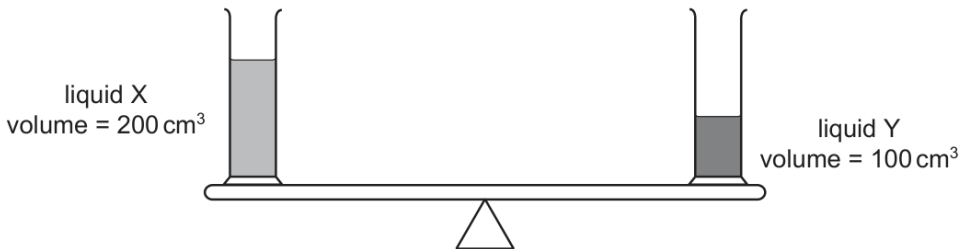
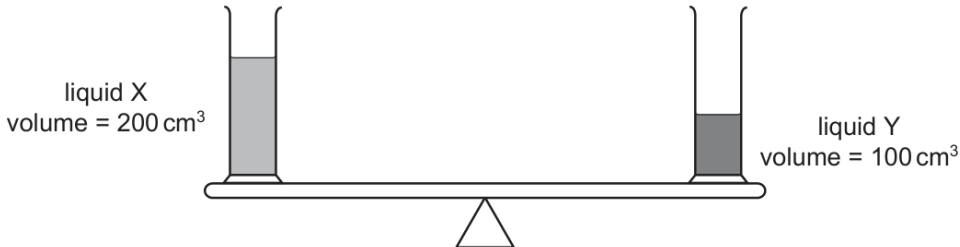
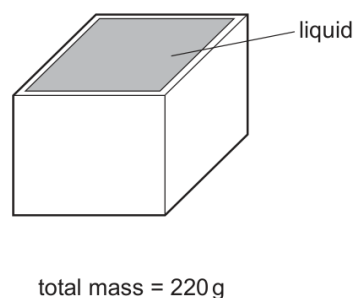
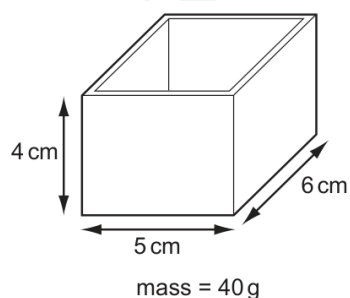


Smart Exam Resources 0625 / 0972 (9-1) IGCSE Physics MEASURING DENSITY	
1	A student is trying to find the density of water and of a large, regularly-shaped solid. Which apparatus is needed to find the density of both? A balance, clock, ruler B balance, measuring cylinder, ruler C balance, measuring cylinder, string D clock, ruler, string
2	A metal drum has a mass of 200 kg when empty and 1000 kg when filled with 1.0 m³ of methylated spirit. What is the density of methylated spirit? A 0.0050 kg / m³ B 0.11 kg / m³ C 800 kg / m³ D 1000 kg / m³
3	Two identical measuring cylinders containing different liquids are placed on a simple balance  They balance as shown. How does the density of X compare with the density of Y? A density of X = 1 × density of Y B density of X = density of Y C density of X = 2 × density of Y D density of X = 4 × density of Y
4	A student needs to find the density of a cubic block of wood. Which two pieces of apparatus should she use? A balance and metre rule B balance and thermometer C measuring cylinder and metre rule D measuring cylinder and thermometer

5	A student is trying to find the density of water and of a large, regularly shaped concrete block. Which apparatus is needed to find the density of both the water and the concrete block? A balance, clock, measuring cylinder B balance, clock, ruler C balance, measuring cylinder, ruler D clock, measuring cylinder, ruler
6	A student is trying to find the density of water and of a large, regularly shaped concrete block. Which apparatus is needed to find the density of both the water and the concrete block? A balance, clock, measuring cylinder B balance, clock, ruler C balance, measuring cylinder, ruler D clock, measuring cylinder, ruler
7	A student is told to measure the density of a liquid and also of a large cube of metal. Which pieces of equipment are sufficient to be able to take the measurements needed? A balance, measuring cylinder and ruler B balance and thermometer C measuring cylinder and ruler D measuring cylinder, ruler and thermometer
8	Two identical measuring cylinders containing different liquids are placed on a simple balance.  They balance as shown. How does the density of X compare with the density of Y? A density of X = 1 × density of Y B density of X = density of Y C density of X = 2 × density of Y D density of X = 4 × density of Y

9



The diagrams show a rectangular box with inside measurements of 5 cm × 6 cm × 4 cm. The box has a mass of 40 g when empty. When filled with a liquid, it has a total mass of 220 g. What is the density of the liquid?

A $\frac{220}{(5 \times 6 \times 4)} \text{ g/cm}^3$

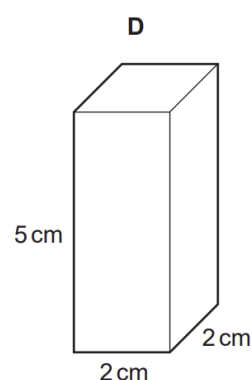
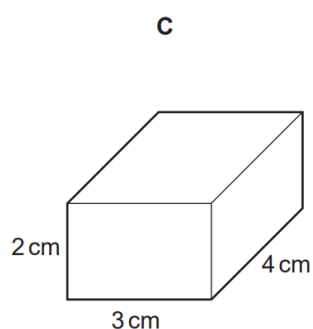
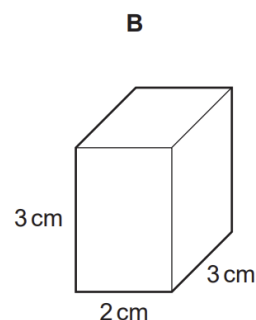
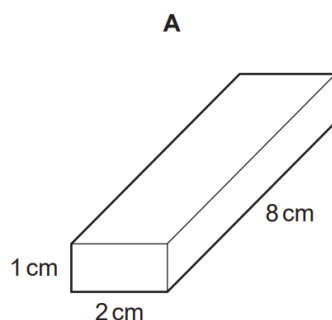
C $\frac{(5 \times 6 \times 4)}{220} \text{ g/cm}^3$

B $\frac{(220 - 40)}{(5 \times 6 \times 4)} \text{ g/cm}^3$

D $\frac{(5 \times 6 \times 4)}{(220 - 40)} \text{ g/cm}^3$

10

The diagrams show four blocks with the same mass. Which block is made from the least dense material? AB



11

A liquid has a density of 0.80 g / cm^3 . Which could be the volume and mass of this liquid?

	volume / cm^3	mass / g
A	2.0	16
B	8.0	10
C	10	8.0
D	16	2.0

A 2.0 16

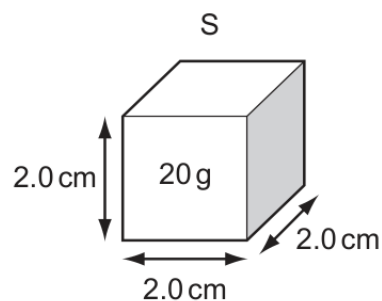
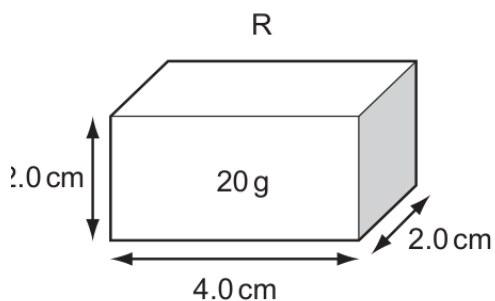
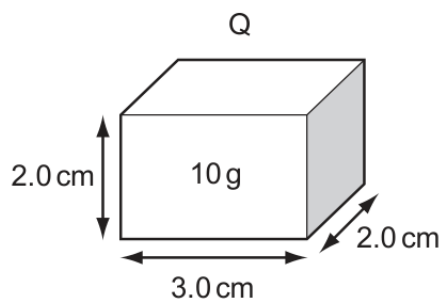
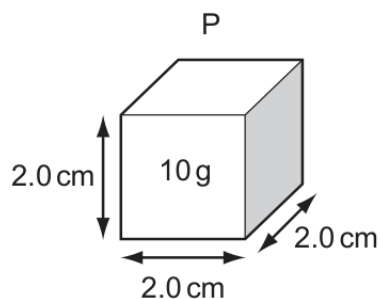
B 8.0 10

C 10 8.0

D 16 2.0

12

Four rectangular blocks, P, Q, R and S are shown. Each block is labelled with its size and its mass.



Which two blocks have the same density?

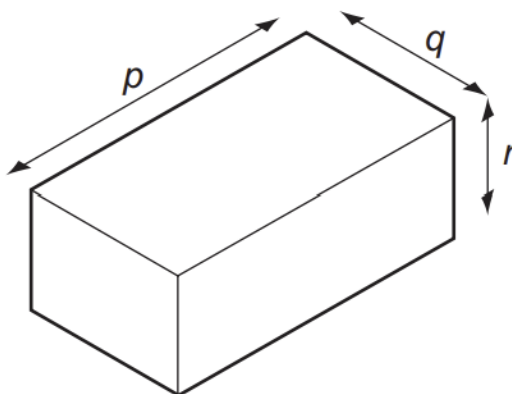
A P and Q

B P and R

C Q and R

D R and S

13



The diagram shows the dimensions of a rectangular block of metal of mass m . Which expression is used to calculate the density of the metal?

A $m \times p \times q$

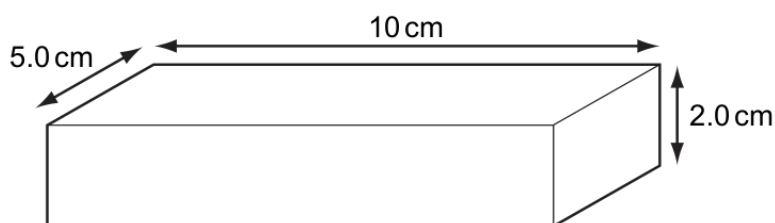
B $m \times p \times q \times r$

C $(p \times q) m$

D $(p \times q \times r)$

14

The diagram shows a rectangular metal block measuring $10 \text{ cm} \times 5.0 \text{ cm} \times 2.0 \text{ cm}$.



Its mass is 250 g . What is the density of the metal?

A 0.20 g / cm^3

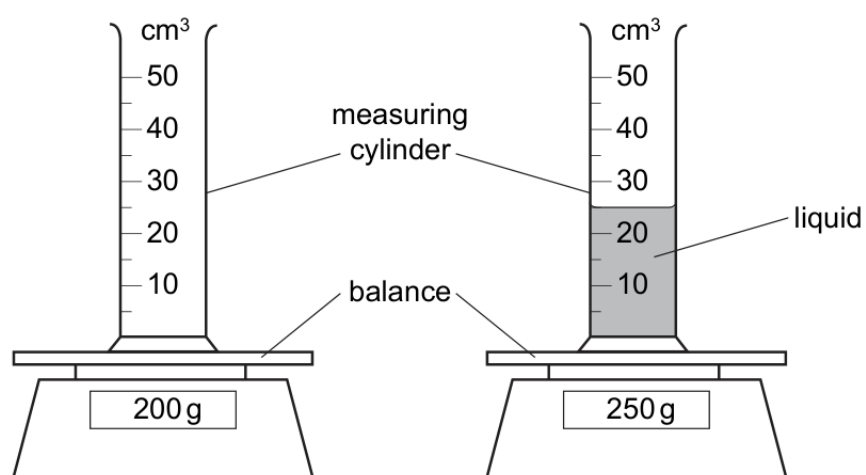
B 0.40 g / cm^3

C 2.5 g / cm^3

D 5.0 g / cm^3

15

The diagram shows an experiment to find the density of a liquid.



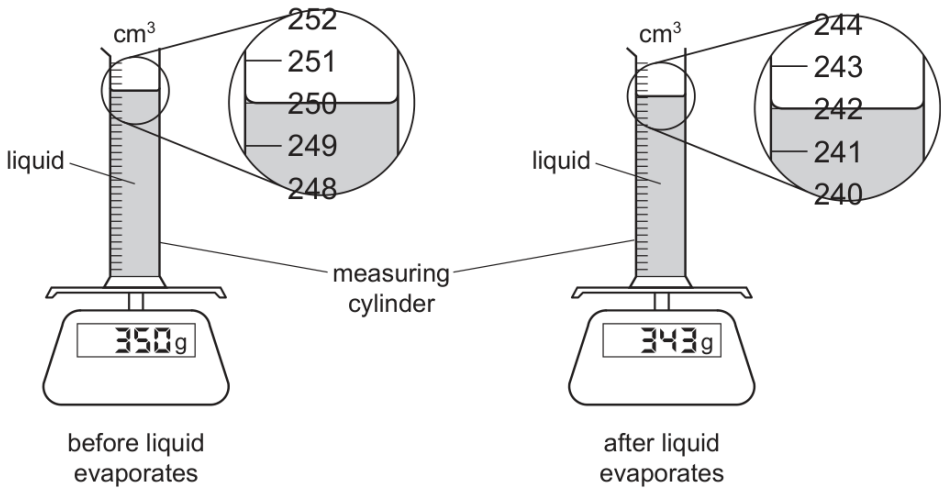
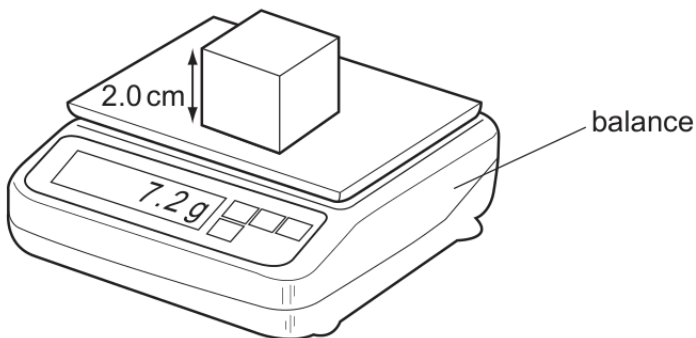
What is the density of the liquid?

A 0.5 g / cm^3

B 2.0 g / cm^3

C 8.0 g / cm^3

D 10.0 g / cm^3

16	Which items of apparatus are required to determine the density of a liquid? A balance and measuring cylinder B balance and thermometer C metre rule and measuring cylinder D metre rule and thermometer
17	A measuring cylinder containing liquid is placed on a top-pan balance. The apparatus is left overnight and some of the liquid evaporates. The diagrams show the readings.  What is the density of the liquid? A 0.875 g / cm^3 B 1.14 g / cm^3 C 1.40 g / cm^3 D 1.42 g / cm^3
18	 A cube of side 2.0 cm is placed on a balance. What is the density of the cube? A 0.90 g / cm^3 B 1.2 g / cm^3 C 1.8 g / cm^3 D 3.6 g / cm^3