DENSITY -MASS-WEIGHT-VOLUME-MEASUREMENTS

1.

Which statement about mass and weight is correct?

A Mass and weight are both forces.

B Mass is a force and weight is not.

C Neither mass nor weight is a force.

D Weight is a force and mass is not.

Ans

2.

An object has a mass of 75 g and a volume of 15 cm^3.

What is its density?

A 0.20 g/cm^3 **B** 5.0 g/cm^3 **C** 60 g/cm^3 **D** 90 g/cm^3

Ans

3.

Which quantity is measured in newtons?

A density

B energy

C potential difference

D weight

Ans

4.	A student tries to determine the density of a metal block. First he measures the mass of the block and finds its weight. Next he measures the length of the sides of the block and calculates its volume. Finally he divides the weight by the volume. The student has made a mistake. What should he do to determine the density? **A** divide mass by volume **B** divide mass by weight **C** divide volume by mass **D** divide volume by weight
Ans	

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5.	Which items of apparatus are used 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
Ans	

6.	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
Ans	

7.	Which property of a body can be measured in newtons?
	A density
	B mass
	C volume
	D weight
Ans	

8.	The diagrams show a rectangular box with inside measurements of 5 cm × 6 cm × 4 cm.

mass = 40 g   total mass = 220 g
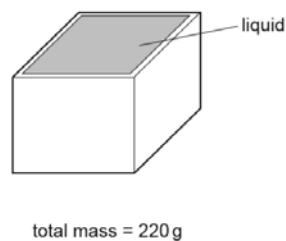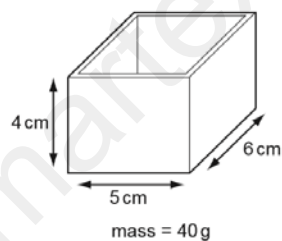
The box has a mass of 40 g when empty. When filled with a liquid it has a total mass of 220 g.

What is the density of the liquid?

A $\dfrac{220}{(5 \times 6 \times 4)}$ g/cm³

B $\dfrac{(220 - 40)}{(5 \times 6 \times 4)}$ g/cm³

C $\dfrac{(5 \times 6 \times 4)}{220}$ g/cm³

D $\dfrac{(5 \times 6 \times 4)}{(220 - 40)}$ g/cm³

Ans	

9.	The table shows the dimensions of four rectangular blocks.

Which block has a volume of $3\,m^3$?

	height/cm	width/cm	depth/cm
A	100	100	100
B	300	100	100
C	300	300	100
D	300	300	300

Ans	

10.

A piece of scientific equipment is taken on a space ship from Earth to a distant planet.

Which property or properties of the equipment **must** remain the same on the distant planet?

	mass	weight
A	✓	✓
B	✓	✗
C	✗	✓
D	✗	✗

key
✓ = must be the same
✗ = does not have to be the same

Ans	

11.

Which line in the table shows the unit for force, the unit for mass and the unit for weight?

	force	mass	weight
A	kg	kg	N
B	kg	N	kg
C	N	kg	N
D	N	N	kg

Ans	