

Classwork 1 Measurements

Name:

Date :

- I. Write the SI units for each of the physical quantities. Write the word (unit) not the symbol.

A	Speed	
B	acceleration	
C	momentum	
D	velocity	
E	displacement	
F	density	
G	volume	
H	mass	
I	weight	
J	energy	

1. For the following non-SI units, write the symbol of its SI units.

A	Gram per cubic centimeters	
B	Newton per cubic centimeters	
C	Gram-meter per minute	
D	Kilometer per minute	
E	milligram	

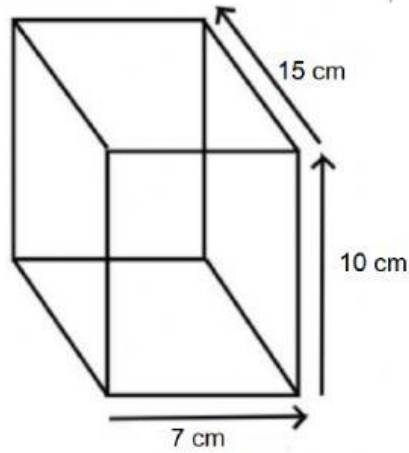
2. Match the formula with the corresponding quantities it measures.

	density
	volume
	weight
	mass
	displaced water

A	$\text{final volume} - \text{initial volume}$
B	$\text{mass} \times \text{gravitational constant}$
C	$\text{density} \times \text{mass}$
D	$\text{mass} \div \text{volume}$
E	$\text{density} \times \text{volume}$
F	$\text{length} \times \text{width} \times \text{height}$

3. The stone of mass 90 grams is weighed on a spring scale measured in Newtons. Show the necessary working.
- Convert 90 grams to kilograms.
 - What will be the weight reading of the stone on the spring scale?
 - The stone is taken to the moon where the gravitational constant is 1.6N/kg. Calculate the weight of the stone on the surface of the moon.
 - The stone is taken to Mars where the gravitational constant is 3.4N/kg. Calculate the weight of the stone on the surface of Mars.

5. A student checks the purity of a small, uniform bar of gold by measuring its density. He measures the dimensions of the bar. The values are shown below.



- a. Calculate the volume of the bar of gold.

- b. Calculate the density of gold if the mass is 19,950 grams.