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	

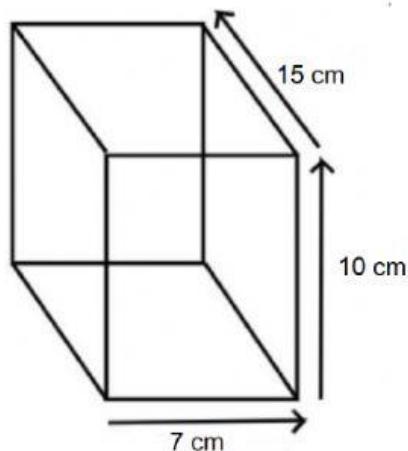2. Match the formula with the corresponding quantities it measures.

	density
	volume
	weight
	mass
	displaced water

A	*final volume* − *initial volu*
B	*mass x gravitational consta*
C	*density x mass*
D	*mass* ÷ *volume*
E	*density x volume*
F	*length x width x height*

3. The stone of mass 90 grams is weighed on a spring scale measured in Newtons. Show the necessary working.

a. Convert 90 grams to kilograms.

b. What will be the weight reading of the stone on the spring scale?

c. 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.

d. 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.