LAB EXPERIMENT: DENSITY

PURPOSE

TASK. Reorder the sentence to express the purpose of the performed experiment.

density| To | the | with | determine | objects | shape | . | of |regular

_____

MATERIALS AND INSTRUMENTS

TASK. Complete the list with sensitivity and range of the measuring instruments.

- A set of objects (a cube, a sphere, a parallelepiped) made of the <u>same material</u> (wood).
- Balance (s= ; r=)
- Ruler (s= ; r=)

EXPERIMENTAL PROCEDURE

Calculate the density by measuring the mass and volume of your samples.

TASK. Insert the missing words.

1. <u>Measuring the Mass</u>
   Measure the ……..of your samples using the ……..provided.
   You will make this measurement <u>three times</u> and calculate the <u>average</u>. Record your results in the table below.

Trial	CUBE	SPHERE	PARALLELEPIPED
1			
2			
3			
Avarage			

2. Measuring the Volume

   To determine the ……..of an object with a regular shape there are standard equations.

   Match the solid with the correct equation to calculate the volume.

Cube	$V = \frac{4}{3}\pi r^3$
Sphere	$V = a^2$
Parallelepiped	$V = a \cdot b \cdot c$

Measure the relevant dimensions of your sample and record the reading in the tables below. Then calculate the volume of each solid using the correct …….

Cube

Trial	a (cm)
1	
2	
3	
Average	

V=

Sphere

Trial	r (cm)
1	
2	
3	
Average	

V=

Parallelepiped

Trial	a (cm)	b (cm)	C (cm)
1			
2			
3			
Average			

V=

3. Calculate the density

	Volume (cm^3)	Mass (grams)	Density (g/cm^3)
Cube			
Sphere			
Parallelepiped			

CONCLUSIONS

TASK. Write here what you understood from the experiment.

- Even though both object have **different shape and volume** what do you observe about the density of the samples?
- Is it consistent with what you expected?