

ACTIVITY # 3.2 Volume and Density

Date due: _____

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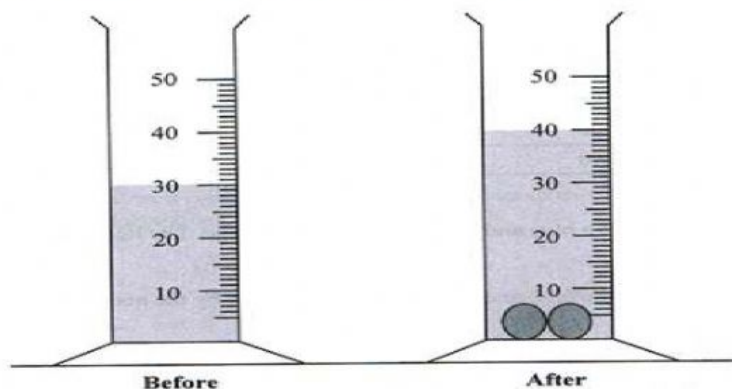
1. A student finds the mass and volume of the three solids as shown in the table.
Which object is denser?

Object	Mass (g)	Volume (cm ³)
A	0.5	0.1
B	10	20
C	50	75
D	12	13

2. The table shows the mass, volume and density for four substances. Which substance has the correct density?

Substance	Mass (kg)	Volume (m ³)	Density (g/cm ³)
A	10.0	3.0	0.33
B	0.5	5.0	0.1
C	6.0	24.0	4.0
D	20.0	10.0	0.5

3. Two identical stones with a total mass of 50 grams were placed in 30 cm³ of water in a measuring cylinder. The water level increases to 40cm³.

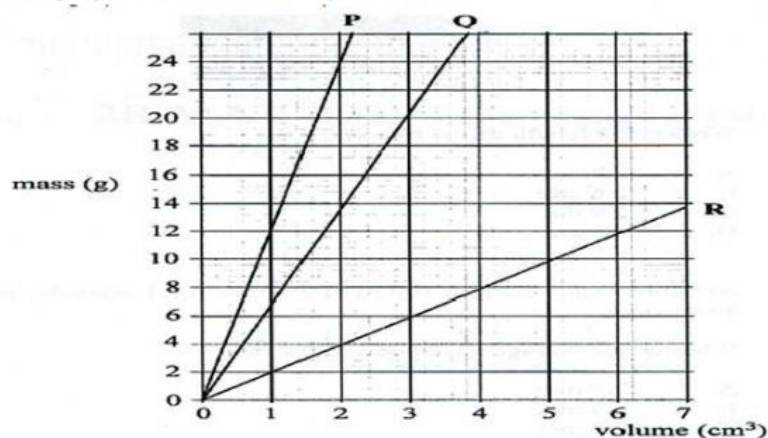


What is the density of the stones?

- A. 1.25 g/cm³ C. 5.0 g/cm³
B. 1.70 g/cm³ D. 10 g/cm³

4. A student measures the mass and volume of different blocks made from materials P, Q, and R. A graph of the results is plotted.

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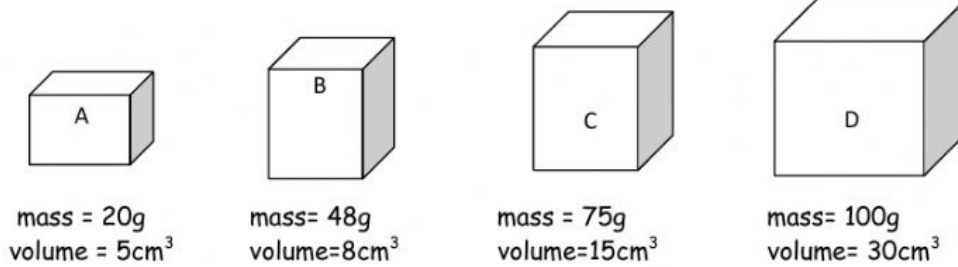
What is the density of the three materials?

Materials	Density (g/cm ³)		
	P	Q	R
A	12	7	2
B	12	2	7
C	2	12	7
D	7	2	12

5. A metal cube is heated. What effect does this have on the cube's volume, mass and density?

	VOLUME	MASS	DENSITY
A	Same	Same	Same
B	Increase	Same	Decrease
C	Increase	Increase	Decrease
D	increase	increase	increase

6. The diagram shows four cubes

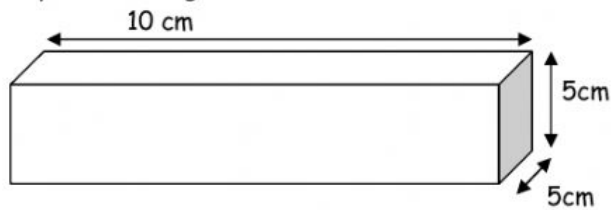


Which cube has the greatest density?

7. When water is heated which two quantities will change?

- A. Density and mass
- B. Density and volume
- C. Mass and volume
- D. Volume and weight

8. Calculate the density of the 200g block shown.



- A. 0.8 g/cm³
- B. 1.25g/cm³
- C. 4.0 g/cm³
- D. 8.0 g/cm³

9. The masses and volume of four substances A,B,C and D were measured and recorded in the chart. From the data collected, suggest which of the substances is water ?

	Mass (g)	Volume (cm ³)
A	1 000	1
B	100	100
C	200	100
D	1	1000