

Name - _____

Start time - __: __

End time - __: __

Solve the following

- For each of the following, use the density and mass given to calculate the volume.
 - density = 8 kg/m^3 , mass = 1 kg
 - density = 90 g/cm^3 , mass = 540 g
 - density = 1510 kg/m^3 , mass = 3926 kg
 - density = 240 kg/m^3 , mass = 14.4 kg
- For each of the following, calculate the missing measure.
 - Pressure = ? Pa, Area = 4 m^2 , Force = 4800 N
 - Pressure = ? N/cm², Area = 80 cm^2 , Force = 640 N
 - Pressure 180 N/m^2 , Area = ? m², Force = 540 N
 - Pressure = 36 N/cm^2 , Area = 30 cm^2 , Force = ? N
- A cube of metal with a volume of 512 cm^3 is resting with one of its faces on horizontal ground. The cube has a weight of 1792 N. What pressure is the cube exerting on the ground?
- A cylinder with a height of 80 cm is resting with one of its circular faces on horizontal ground. The weight of the cylinder is 560 N and it exerts a pressure of $70\,000 \text{ N/m}^2$ on the ground. What is the volume of the cylinder in cm³?
- A car travels at $x \text{ km/h}$ for the first half of a journey and then at $y \text{ km/h}$ for the second half. Write an expression for the average speed of the whole journey in m/s.
- Barney is paid 12p for every minute he works. What is his rate of pay in pounds per hour?

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