

Name: _____ Section: _____

Density Practice Problems - <http://www.fordhamprep.com/gcurran/sho/sho/lessons/lesson27.htm>

Directions: Use the density formula below to derive two additional formulas, one for calculating mass and one for calculating volume. You can approach this as if you were solving for an unknown in math class or you can use the density triangle. Once you have all three formulas, use them to solve questions 1-6.

You must show all work!

Mass =

Density = $\frac{\text{Mass}}{\text{Volume}}$

Volume =

- 1) What is the mass of a 350 cm^3 sample of pure silicon with a density of 2.336 g/cm^3 ?
- 2) A student finds a rock on the way to school. In the laboratory he determines that the volume of the rock is 22.7 cm^3 , and the mass is 39.943 g . What is the density of the rock?
- 3) The density of lead is 11.342 g/cm^3 . What would be the volume of a 200.0 g sample of this metal?
- 4) The density of silver is 10.49 g/cm^3 . If a sample of pure silver has a volume of 12.993 cm^3 , what would the mass be?
- 5) If 30.943 g of a liquid occupy a space of 35.0 ml , what is the density of the liquid in g/cm^3 ?
- 6) Pure gold has a density of 19.32 g/cm^3 . How large would a piece of gold be if it had a mass of 318.97 g ?