Density

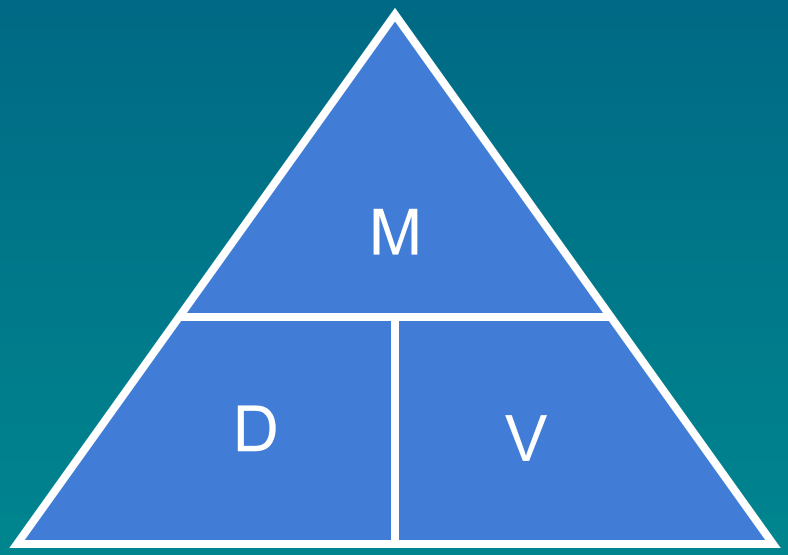
What is Density

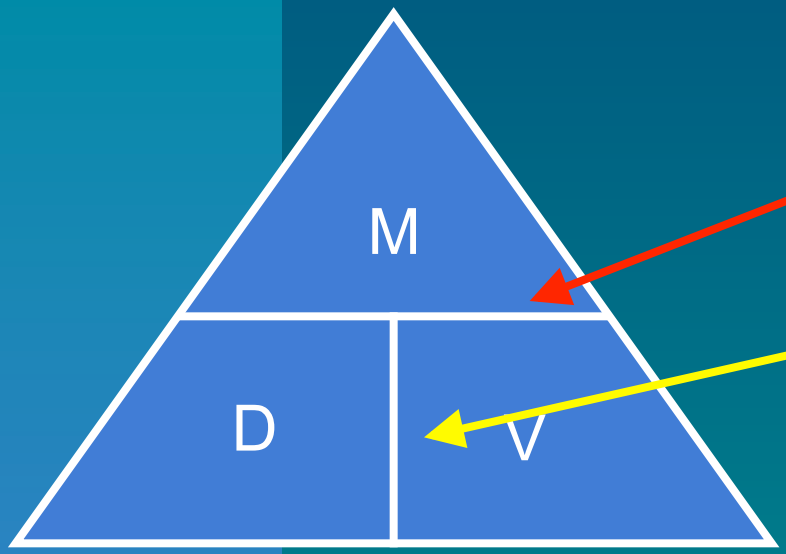
- **Density is a characteristic property of an object that describes the relationship between the object's mass and volume**
- **The formula to calculate density is:**

Density = Mass ÷ Volume

The Density Triangle of Science

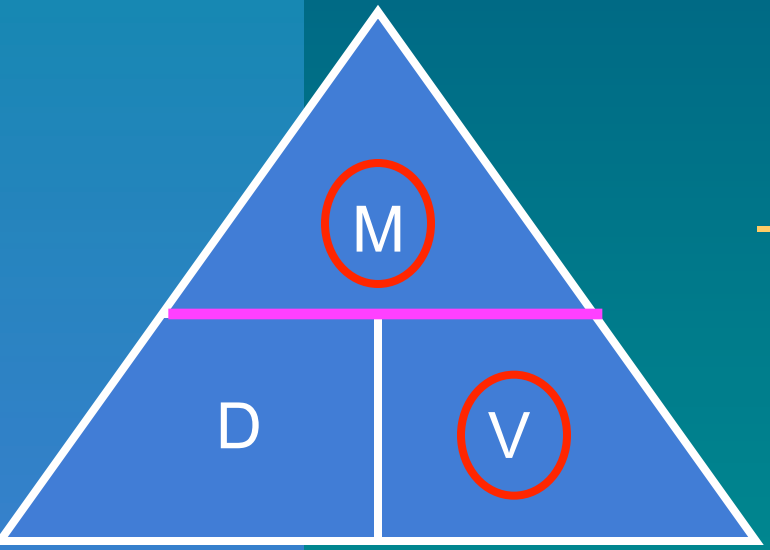
- To remember the formula for density use the density triangle:





- This line represents ÷
- This line represents x

Using the Density Triangle to Find …

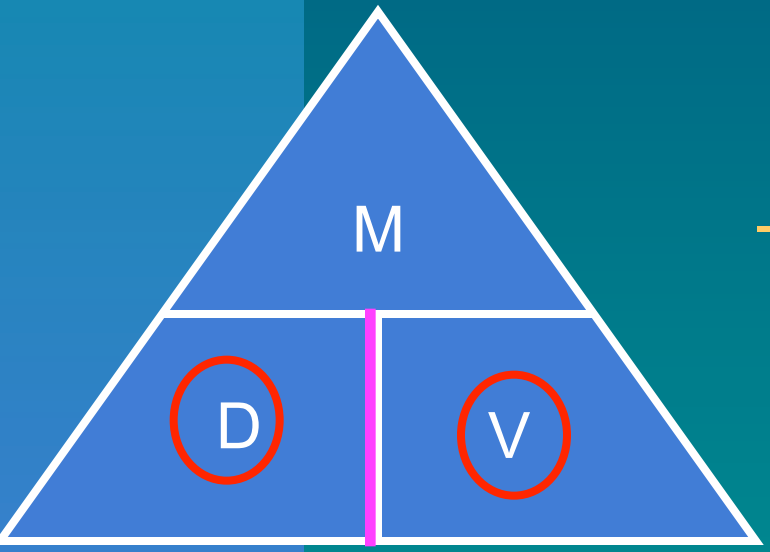


- To find density:
  - You need mass and volume
  - Write your formula starting with what you are looking for:

    D =
  - Now read your triangle:

$$D = M \div V$$

Using the Density Triangle to Find …

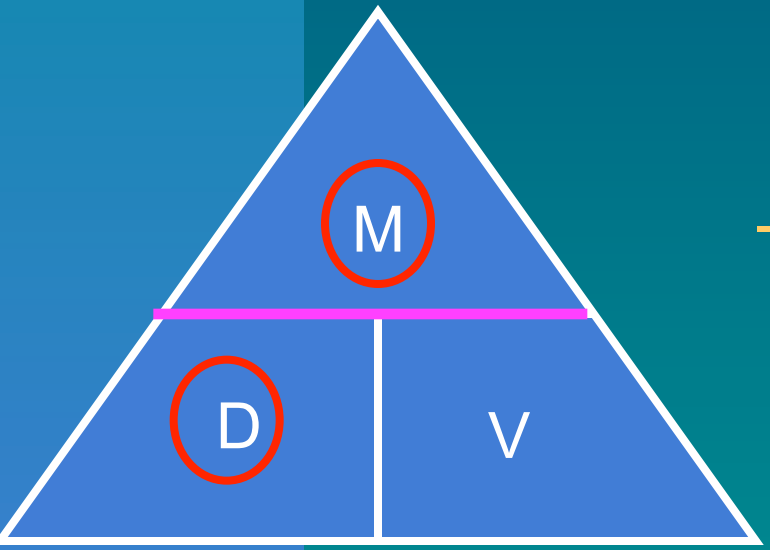


- To find Mass:
  - You need density and volume
  - Write your formula starting with what you are looking for:

    M =
  - Now read your triangle:

$$M = D \times V$$

Using the Density Triangle to Find …

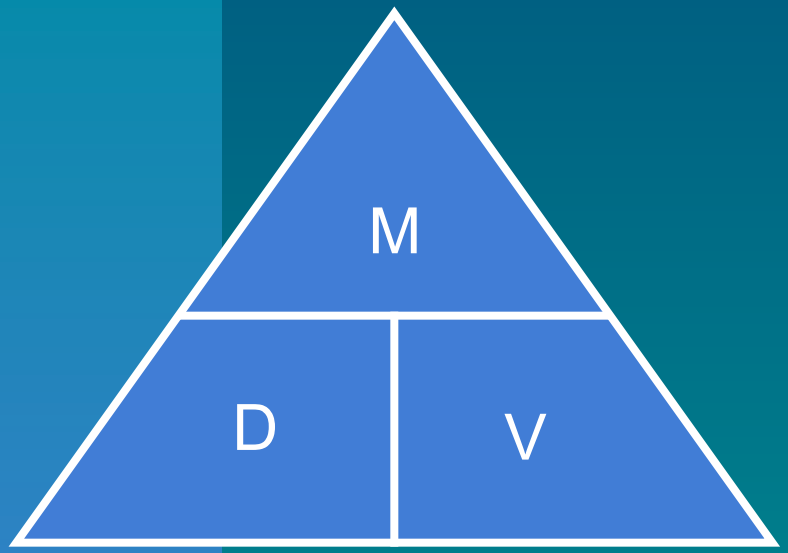


- To find Volume:
  - You need density and mass
  - Write your formula starting with what you are looking for:

    V =
  - Now read your triangle:

$$V = M \div D$$

Complete the Formula



a) $D = \frac{\_\_\_\_\_}{V}$.

b) $M = \_\_\_\_\_$

c) $\frac{\_\_\_\_\_}{V} = \frac{M}{V}$

d) $M \div V = D$

Units for Density

- The units depend on the units for the mass and volume
- Example:

  Mass = grams, Volume = Litres

  Density = grams ÷ litres

  = g/L

Density How-To

- ***Density of Water = 1g/ml***

	Regular	Irregular	Liquid	Unit
Mass				
Volume				
Density				

Mass and Volume

- Mass:
- Amount of matter an object has

- Volume:
- Amount of space an object takes up