Density

Concentration of matter in an object.

Classroom with 35 students > density > classroom with 2 students

Density of object = ratio of mass to volume

Hence

desnity = $\frac{\text{mass}}{\text{volume}}$ or $d = \frac{m}{v}$ or $d = m / v$ *see ESRT

Number must have units!

Volume = amount of space a substance occupies
Mass = amount of matter in an object

e.g.: mineral mass = 44 grams and volume = 20 cm^3 , what is the density?

$d = m/v$

$d = \frac{44\ g}{20\ cm^3}$

$d = 2.2\ g/cm^3$

e.g.: object's mass = 100 g and volume = 200 cm^3 calculate density.

e.g.: m = 10 g and v = 5 cm^3

e.g.: density = 5 g / cm^3 and mass = 20 g, what is the volume?

e.g.: d = 0.1 g / cm^3 and v = 50 cm^3 what is the mass?

Changes in temperature and pressure affect density.