

Planetary Mini-Project Fact Sheet

Equations and information you might need to know!

V - Volume of a sphere $V = \frac{4}{3}\pi r^3$, r = radius

D - Diameter of sphere or circle $D = 2 \times r = 2r$

$\pi = 3.14159....$

C - Circumference of a circle $C = 2 \times \pi \times r = 2\pi r$

A - Area of a circle $A = \pi r^2$

Vs - Volume of a hollow sphere =

$$V_s = \frac{4}{3}\pi \times (\text{Larger radius})^3 - \frac{4}{3}\pi \times (\text{Smaller radius})^3$$

Proportion of volume = (Volume of region) \div (Total volume)

Percentage of volume = Proportion of volume \times 100%

Proportion of mass = (Mass of region) \div (Total mass)

Percentage of mass = Proportion of mass \times 100%

1km = 1000m = 10^3 m = 10^5 cm = 100,000cm

1 Tonne = 1000kg = 10^3 kg = 10^6 g = 1,000,000g

1km² = $(10^3\text{m})^2 = 10^6\text{m}^2 = (10^5\text{cm})^2 = 10^{10}\text{cm}^2$

1km³ = $(10^3\text{m})^3 = 10^9\text{m}^3 = (10^5\text{cm})^3 = 10^{15}\text{cm}^3$

1g/cm³ = $10^6\text{g/m}^3 = 10^{15}\text{g/km}^3$

1 mile = 1600m = 1.6km

