1   Habib has two identical tins.

He puts 600 grams of flour into one of the tins.
The flour fills the tin completely.
The density of the flour is $0.6\,\text{g/cm}^3$

Habib puts 600 grams of salt into the other tin.
The salt does **not** fill the tin completely.
The volume of the space in the tin that is **not** filled with salt is $700\,\text{cm}^3$

Work out the density of the salt.
You must show all your working.

Density : $\dfrac{\text{Mass}}{\text{Volume}}$

Volume of tin : $\dfrac{\text{Mass}}{\text{Density}}$

$= \dfrac{600}{0.6}$

$= 1000\,\text{cm}^3$ ①

Volume of salt : $1000 - 700$

$= 300\,\text{cm}^3$ ①

Density of salt $= \dfrac{600}{300}$ ①

$= 2\,\text{g/cm}^3$

.............2.............. g/cm^3 ①

(Total for Question 1 is 4 marks)