

Edexcel GCSE Mathematics Calculator 2024 Higher Paper 3 Revision Worksheet**Problem Solving:**

Habib has two identical tins:

He puts **600 grams of flour** into one tin, which fills the tin completely.

The density of the flour is **0.6 g/cm³**.

He puts **600 grams of salt** into the other tin, but the salt does **not** fill the tin completely.

The volume of the space in the tin not filled with salt is **700 cm³**.

Work out the density of the salt. Show all your working.

Algebraic Reasoning Problem

There are only red counters and yellow counters in bag A. The number of red counters : number of yellow counters = 3 : 5

There are only green counters and blue counters in bag B. The number of counters in bag B is half the number of counters in bag A.

Given that there are x red counters in bag A,

Use algebra to show that the total number of counters in bag A and bag B is $4x$.

Compound Interest Problem

At the start of 2022 Megan invested some money in a savings account. The account paid 3.5% compound interest each year.

At the end of 2022 interest was added to the account then Megan took £750 from the account.

At the end of 2023 interest was added to the account then Megan took £1000 from the account.

There was then £2937.14 in the account.

Work out how much money Megan invested at the start of 2022.

You must show all your working.

Arithmetic and Geometric Sequences

(a) $x - 4$, $x + 2$ and $3x + 1$ are three consecutive terms of an arithmetic sequence.

Find the value of x .

(b) $y - 4$, $y + 2$ and $3y + 1$ are three consecutive terms of a geometric sequence.

Find the possible values of y .
