Cambridge O Level MATHEMATICS (SYLLABUS D) 4024

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Paper 1 Non-calculator **May/June 2024**

Questions (3-4)

3 Olga writes a list of five numbers.

The median of the numbers is 12.
The mode of the numbers is 11.
The range of the numbers is 10.

The sum of the numbers is 75.

Find the five numbers in Olga's list.

..... , ... , ... , ... , ... [3]

Solution:

Since There are five numbers, The median is 12, so Third term is 12.

As the mode of numbers are 11, so first three numbers are 11, 11, 12.

As Range = Largest number − least number

$10 =$ Largest number $- 11$

$\Rightarrow$ largest number $= 21$

$\therefore$ The five numbers are

$11, 11, 12, x, 21$

As Given sum of numbers $= 75$

$\Rightarrow 11 + 11 + 12 + x + 21 = 75$

$55 + x = 75$

$x = 75 - 55 = 20$

$\therefore$ five numbers, 11, 11, 12, 20, 21

4 **(a)** Convert 4 kilograms to grams.

..... g [1]

(b) Convert $250\,cm^3$ to litres.

..... litres [1]

Solution:

(a) $1\ kg = 1000\ g$

$4\ kg = 1000 \times 4\ g$

$4\ kg = 4000\ g$ Ans

(b) $1000\ cm^3 = 1$ litre

$1\ cm^3 = \frac{1}{1000}$ litre

$250\ cm^3 = \frac{250}{1000}$

$= \frac{1}{4}$

$= 0.25$ litres