Problem of the Week
Problem A and Solution
Snow Days

Problem

Tapeesa monitored the amount of snowfall each day, Monday through Sunday, for four weeks. Here is what she recorded:

- The first week it snowed 5 mm each day.

- The second week snow only fell on two days: 8 cm of snow fell on Tuesday and 2 cm of snow fell on Friday.

- It did not snow the third week at all.

- A total of half a metre of snow fell during the last week.

What was the total amount of snowfall over the four weeks?

Solution

To find the total, we should have all the measurements with the same unit. Let's consider all of the snowfall amounts in centimetres.

The first week it snowed $7 \times 5 = 35$ mm in total. This is equal to 3.5 cm.

The second week it snowed a total of $8 + 2 = 10$ cm.

Since 0.5 m is equal to 50 cm, that is how much it snowed during the fourth week.

Therefore, the total snowfall for the four weeks was $3.5 + 10 + 50 = 63.5$ cm.

Alternatively, we could calculate the amounts in millimetres.

In the second week, it snowed a total of $10 \times 8 = 80$ mm and $10 \times 2 = 20$ mm, for a total of $80 + 20 = 100$ mm. Since 1 m is equal to 1000 mm, then in the last week it snowed half of 1000 mm, or 500 mm. Therefore, the total amount of snowfall for the four weeks was $35 + 100 + 500 = 635$ mm, which is equal to 63.5 cm.