Task:

In one fortnight of a given month, there was a rainfall of 10 cm in a river valley. If the area of the valley is 7280km*1km , show that the total rainfall was approximately equivalent to the addition to the normal water of three rivers each of dimensions 1072km*75m*3m.

Solution:

Please note that the area of the valley was corrected from **9**7280km*1km to 7280km*1km, otherwise there is no equivalent to the water of three rivers.

Let's calculate the volume of water in the river in cubic meters:

$$V_r = 1072\text{km} \cdot 75\text{m} \cdot 3\text{m} = 1072000\text{m} \cdot 75\text{m} \cdot 3\text{m} = 241\ 200\ 000\ \text{m}^3$$

Let's calculate the amount of rainfall during the night downpour in cubic meters:

$$V_d = 97280\text{km} \cdot 1\text{km} \cdot 10\ \text{cm} = 7280000\text{m} \cdot 1000\text{m} \cdot 0.1\text{m} = 728\ 000\ 000\ \text{m}^3$$

Let's find the ratio between the calculated volumes:

$$\frac{V_d}{V_r} = \frac{728\ 000\ 000\ \text{m}^3}{241\ 200\ 000\ \text{m}^3} = 3.018 \ldots \approx 3$$

Answer: Yes, indeed, rainfall was approximately equivalent to the addition to the normal water of three rivers.