Conditions

James bought a few hamsters. For each day after the first day of the week, the hamsters ate 20 grams of food more than the previous day. The hamsters grew fast, finishing, 1,260 grams of food in the first week. How much food did the hamsters eat on the first day?

Solution

Let the quantity of food, which was eaten by hamsters on the first day is X.

Then, on the 2nd day it is X+20, 3rd – X+40, 4th – X+60, 5th – X+80, 6th – X+100, 7th – X+120.

And all this amount of food is 1 260 grams.

Here is the equation:

$$x + x + 20 + x + 40 + x + 60 + x + 80 + x + 100 + x + 120 = 1260$$

$$7x + 420 = 1260$$

$$x = \frac{1260 - 420}{7} = 120$$

Answer: On the first day the hamsters ate 120 grams of food.