

**Answer on question 36925 – Math – Calculus**

Chocolates are sold in a store. The shop owner declared that if someone buys for 6 to 10 chocolates, he will give a discount of 1 taka on each chocolate. If someone buys from 11 to 15 chocolates, he'll give a further discount of 1 taka on each chocolate. But it will always cost you more as you buy more chocolates. If you decide to buy 3 chocolates from that store, what is the minimum amount of money you need to spend?

**Solution**

Let  $x$  it is the price of one chocolate. According to the condition of the task 5 chocolates cost less than 6 chocolates and 10 chocolate cost less than 11. We obtain the following system of inequalities

$$\begin{cases} 5x < 6(x - 1) \\ 10(x - 1) < 11(x - 2) \end{cases} \Rightarrow \begin{cases} x > 6 \\ x > 12 \end{cases}$$

This means that the minimum price of the chocolate is 13 takas. And minimum amount of money that you need to spend for 3 chocolates is  $3 \cdot 13 = 39$  takas.

**Answer:** 39 takas.