Answer on question #39490, Math, Algebra

The cost of printing x copies of a pamphlet is $C, where C = Ax + B for certain constants A and B. If it costs $5,000 to print 10,000 copies and $6,000 to print 15,000 copies, how much it will cost to print 100,000 copies?

After this task we can build next system of equations:
$$\begin{cases} A * 10000 + B = 5000 \quad (1) \\ A * 15000 + B = 6000 \quad (2) \end{cases}$$
We will subtract (1) from (2) ((2)-(1)) and we will get:
$$A * 5000 = 1000 \quad => \quad A = \frac{1}{5}$$
So,
$$\frac{1}{5} * 10000 + B = 5000 \quad => B = 3000$$
Now we know A and B, and can calculate how much it cost to print 100000 copies:
$$A * 100000 + B = \frac{1}{5} * 100000 + 3000 = 23000$$
Solution: It will cost $23000.