Урок 2 : задание 1

(x, y) : $(1, 2)$, $(3, 10)$; $(5, c)$.

$y = ax^2 + bx + c$

$$\begin{cases} 2 = a + b + c \\ 10 = 9a + 3b + c \\ 1 = 25a + 5b + c \end{cases} \rightarrow \begin{cases} c = 2 - a - b \\ 10 = 9a + 3b + 2 - a - b \\ 1 = 25a + 5b + 2 - a - b \end{cases} \rightarrow$$

$$\rightarrow \begin{cases} c = 2 - a - b \\ 8 = 8a + 2b \\ -1 = 24a + 4b \end{cases} \rightarrow \begin{cases} c = 2 - a - b \\ 16 = 16a + 4b \\ -1 = 24a + 4b \end{cases} \rightarrow \begin{cases} c = 2 - a - b \\ b = 4 - 4a \\ 8a = -17 \end{cases} \rightarrow$$

$$\rightarrow \begin{cases} c = -\frac{67}{8} \\ b = \frac{25}{2} \\ a = -\frac{17}{8} \end{cases}$$

Ответ: $y = -\frac{17}{8}x^2 + \frac{25}{2}x - \frac{67}{8}$

$$\left(y = 17x^2 - 100x + 67 \right)$$