№ 12. $\begin{cases} y = 3x^2 + x - 4 \\ y = 7x + 5 \end{cases}$

$3x^2 + x - 4 = 7x + 5$

$3x^2 - 6x - 9 = 0$

$x^2 - 2x - 3 = 0$

$\left[\begin{array}{l} x = -1 \\ x = 3 \end{array}\right.$

$S = \int_{x_1}^{x_2} (7x + 5 - 3x^2 - x + 4)\,dx = \int_{-1}^{3} (-3x^2 + 6x + 9)\,dx =$

$= -x^3 + 3x^2 + 9x \Big|_{-1}^{3} = 32$

Ответ: 32.