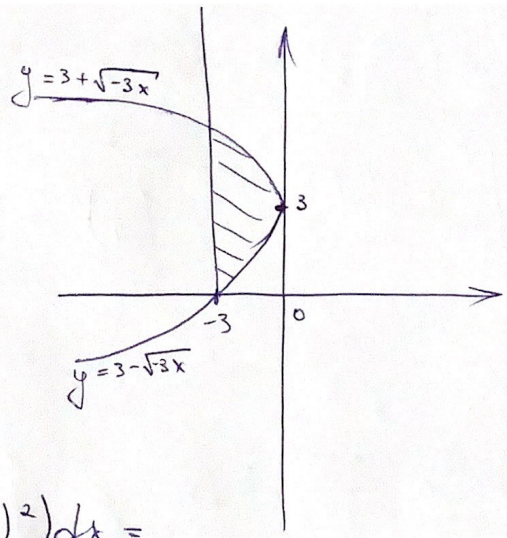
№ 15. $\begin{cases} (y-3)^2+3x=0 \\ x=-3 \end{cases}$



$(y-3)^2 = -3x$

$y-3 = \pm\sqrt{-3x}$

$y = 3 \pm \sqrt{-3x}$

$$V = \pi \int_{-3}^{0} \left((3+\sqrt{-3x})^2 - (3-\sqrt{-3x})^2 \right) dx =$$

$$= \pi \int_{-3}^{0} \left(9 - 3x + 6\sqrt{-3x} - 9 + 3x + 6\sqrt{-3x} \right) dx = \pi \int_{-3}^{0} 12\sqrt{-3x}\, dx =$$

$$= \frac{12\pi}{-3} (-3x)^{\frac{3}{2}} \Big|_{-3}^{0} = \quad (+9)^{\frac{3}{2}} \cdot 4\pi = 108\pi$$

Ответ: 108π.