Домашнее задание

▶ **1.** $(x^2 - 4)\sqrt{x + 1} = 0$

▶ **2.** $\sqrt{2x - 6} + \sqrt{x + 4} = 5$

▶ **3.** $\sqrt{2x + 5} - \sqrt{3x - 5} = 2$

▶ **4** [2]. $\sqrt{x + 1} - 1 = \sqrt{x - \sqrt{x + 8}}$

▶ **5.** $\sqrt{2x^2 + 8x + 7} - x = 2$

▶ **6.** $x + \sqrt{2x^2 - 7x + 5} = 1$

▶ **7** [2]. $\sqrt{x + 2} - \sqrt{x - 1} = \sqrt{2x - 3}$

▶ **8.** $\sqrt{x^2 - 3x + 2} - 3 - x > 0$

▶ **9.** $x + 4 \leqslant \sqrt{x + 46}$

▶ **10.** $x - 3 < \sqrt{x + 27}$

▶ **11.** $\sqrt{x^2 + 2x - 3} < x$

▶ **12.** $\sqrt{x^2 - x - 2} \leqslant x - 1$

▶ **13.** $x + 4 < \sqrt{-x^2 - 8x - 12}$

▶ **14.** $\dfrac{3 - x}{\sqrt{15 - x}} < 1$

▶ **15.** $\dfrac{\sqrt{x + 5}}{1 - x} < 1$

▶ **16.** $\dfrac{\sqrt{24 - 2x - x^2}}{x} < 1$

▶ **17.** $\sqrt{1 - 3x} - \sqrt{5 + x} > 1$

▶ **18** [2]. $\dfrac{\sqrt{6 + x - x^2}}{2x + 5} \geqslant \dfrac{\sqrt{6 + x - x^2}}{x + 4}$

▶ **19.** $(x + 1)\sqrt{x^2 + x - 2} = 2x + 2$

▶ **20.** $x\sqrt{36x + 1261} = 18x^2 - 17x$

▶ **21.** $\sqrt{(x - 4)(5x + 41)} < 2(2x - 7)$

▶ **22.** $\dfrac{\sqrt{51 - 2x - x^2}}{1 - x} < 1$

▶ **23.** $\sqrt{x} \leqslant x - 1$

▶ **24.** $(x + 2)\sqrt{x^2 + 7x + 6} \geqslant 0$

▶ **25.** $\sqrt{2x^2 + x} > 1 + 2x$

▶ **26.** $\sqrt{4 - 6x - x^2} = x + 4$

▶ **27.** $(x^2 - 18x + 77)\sqrt{10 - x} \geqslant 0$

▶ **28.** $\dfrac{\sqrt{x^2 + x - 6} + 3x + 13}{x + 5} > 1$

▶ **29.** $x + \sqrt{x^2 + x - 6} > -1$

▶ **30.** $2x - 17 < \sqrt{81 - x^2}$