zfuto 1

次の2次不等式を解け。

(1) $x(x-5) < 0$

(2) $x^2 - 5x - 6 \geqq 0$

(3) $x^2 \leqq 25$

(4) $2x^2 > 7x - 3$

(5) $2x^2 + \sqrt{3}x - 3 \leqq 0$

(6) $-x^2 - x + 1 > 0$

(7) $-4x^2 \leqq 4x + 1$

(8) $\sqrt{5}x \geqq x^2 + 2$

(1) $0 < x < 5$

(2) $(x-6)(x+1) \geqq 0$

$x \geqq 6 \ , \ x \leqq -1$

(3) $-5 \leqq x \leqq 5$

(4) $2x^2 - 7x + 3 > 0$

$\dfrac{1}{2} x \begin{smallmatrix} -3 \to -6 \\ -1 \to -1 \end{smallmatrix}$

$(x-3)(2x-1) > 0$

$x < \dfrac{1}{2} \ , \ x > 3$

(5) $\dfrac{1}{2} x \begin{smallmatrix} \sqrt{3} \to 2\sqrt{3} \\ -\sqrt{3} \to -\sqrt{3} \end{smallmatrix}$

$(x+\sqrt{3})(2x-\sqrt{3}) \leqq 0$

$-\sqrt{3} \leqq x \leqq \dfrac{\sqrt{3}}{2}$

(6) $x^2 + x - 1 < 0$

$x = \dfrac{-1 \mp \sqrt{1+4}}{2}$

$\dfrac{-1-\sqrt{5}}{2} < x < \dfrac{-1+\sqrt{5}}{2}$

(7) $4x^2 + 4x + 1 \geqq 0$

$(2x+1)^2 \geqq 0$

すべての実数

(8) $x^2 - \sqrt{5}x + 2 \leqq 0$

$x = \dfrac{\sqrt{5} \pm \sqrt{5-8}}{2}$ 判別式 $< 0$

よって

解なし