



# 数学I

## 第3章 2次関数

### 2次不等式基本

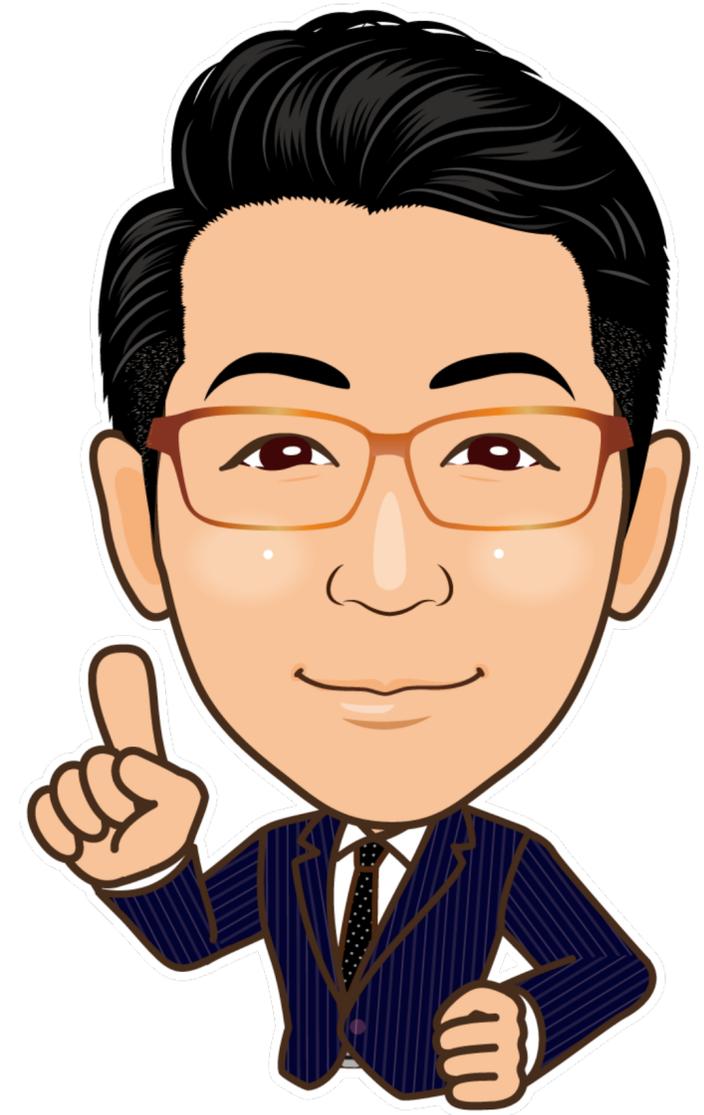


$$ax^2 + bx + c < 0, \quad ax^2 + bx + c \leq 0, \quad ax^2 + bx + c > 0, \quad ax^2 + bx + c \geq 0$$



$$y = ax^2 + bx + c \text{ と } x \text{ 軸 と 考えろ!!}$$

グラフを可視化して考える!!



(ex)

$$x^2 - 6x + 5 < 0$$

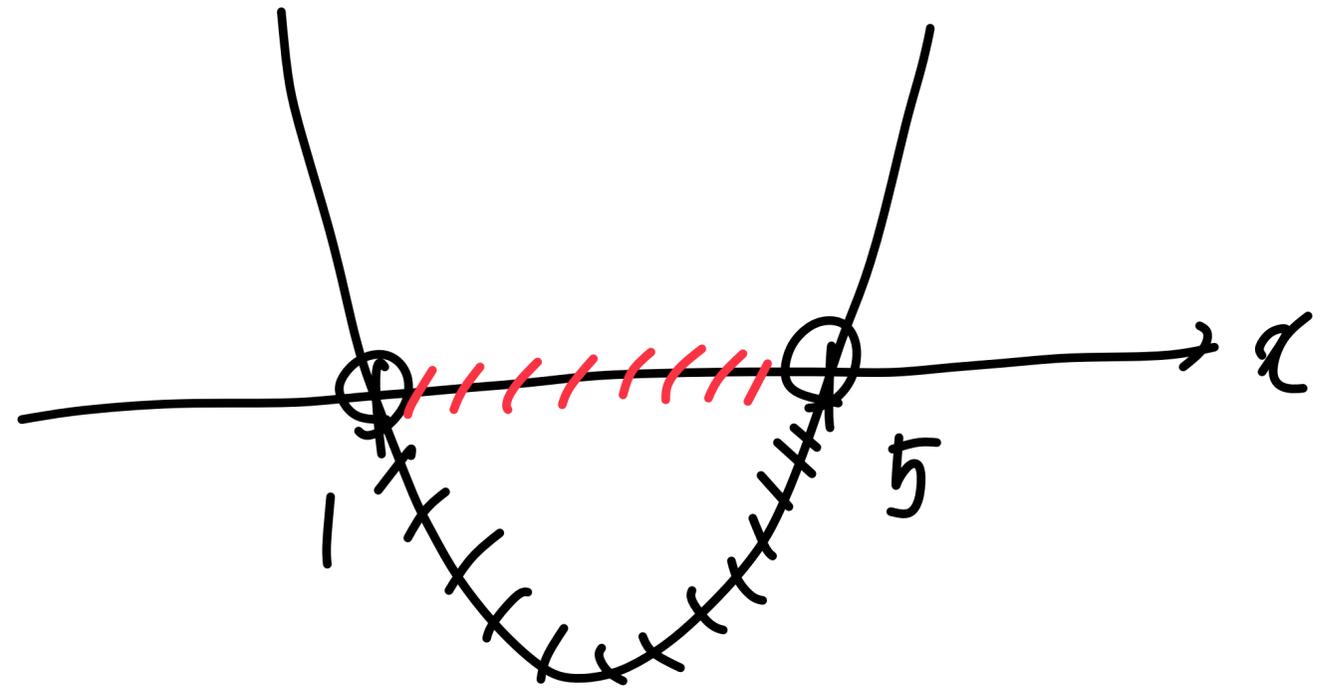
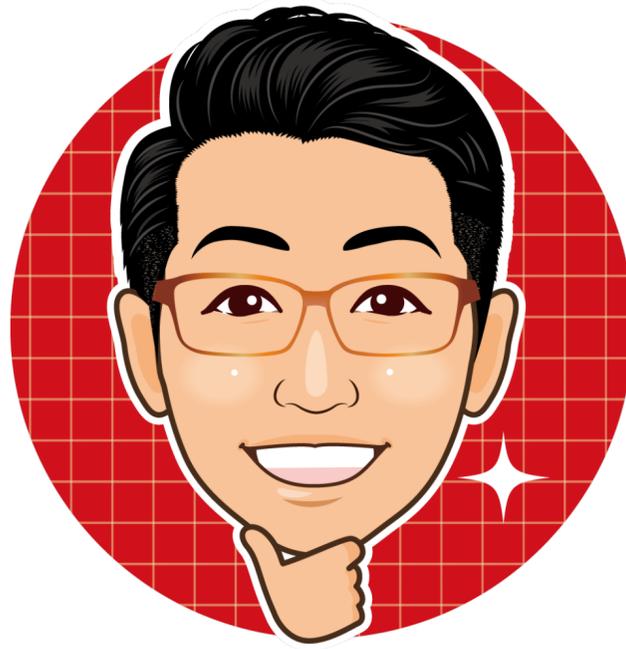
$$y = x^2 - 6x + 5 \quad (= 1 \text{ " } 2)$$

$y < 0$  とき  $x$  の範囲を 考えよ!!

$$x^2 - 6x + 5 = 0$$

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

$$x = 1, 5$$



$$x^2 - 6x + 5 < 0$$

$$\underline{\underline{1 < x < 5}}$$

$$(ex) \quad -x^2 + 4x + 1 \leq 0$$

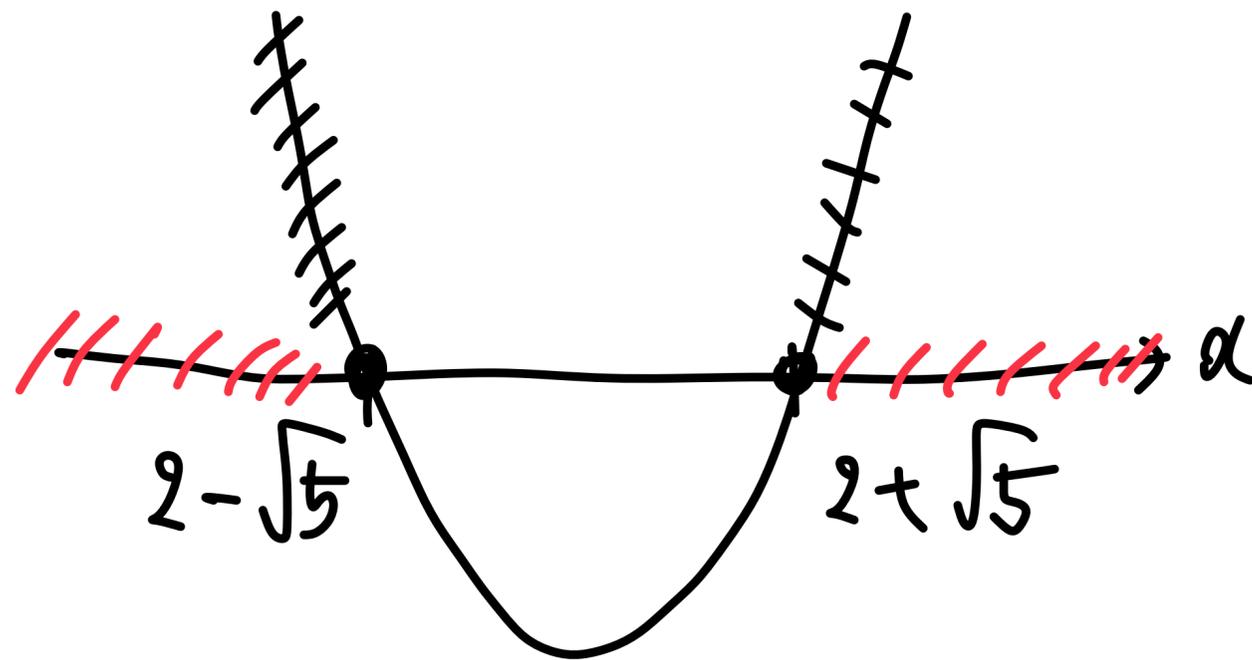
$$x^2 - 4x - 1 \geq 0$$

$$y = x^2 - 4x - 1 \quad | \quad 1: 1, 2$$

$y \geq 0$  となる  $x$  の範囲を 考え!!

$$x^2 - 4x - 1 = 0$$

$$x = \frac{2 \pm \sqrt{4+1}}{1} \\ = 2 \pm \sqrt{5}$$



$$x^2 - 4x - 1 \geq 0$$

$$x \leq 2 - \sqrt{5}, \quad 2 + \sqrt{5} \leq x$$

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