



数学II

第6章 微分法と積分法

方程式への応用



(例) $x^3 - 3x - 1 = 0$ の
異なる実数解の個数

$$y = x^3 - 3x - 1 \quad x > x >$$

$$y = x^3 - 3x - 1 \quad x \quad y = 0 \text{ (x軸)}$$

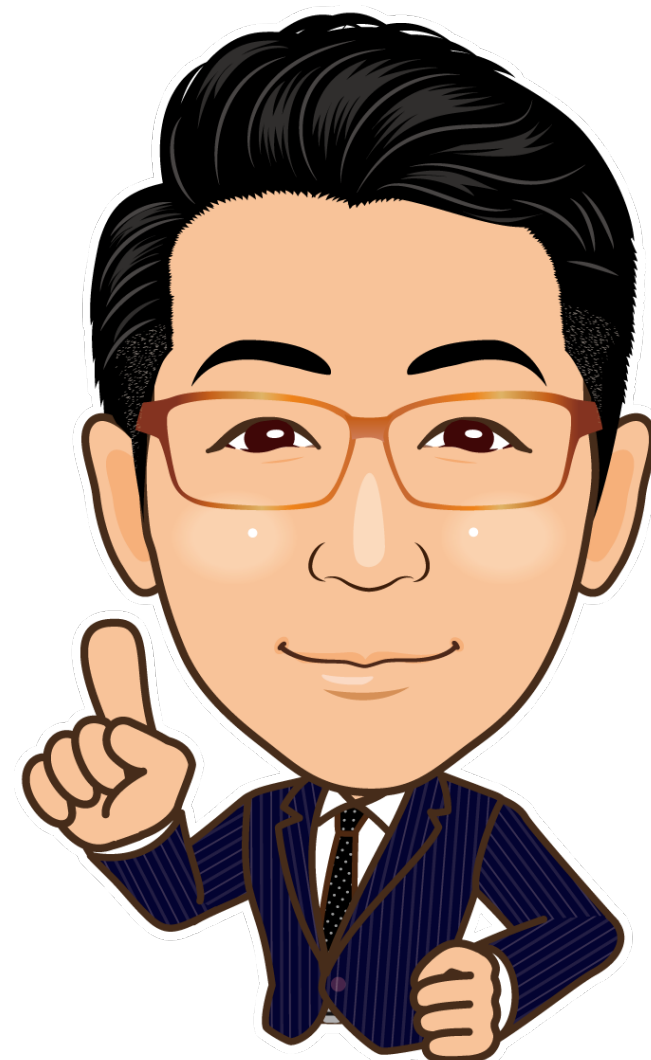
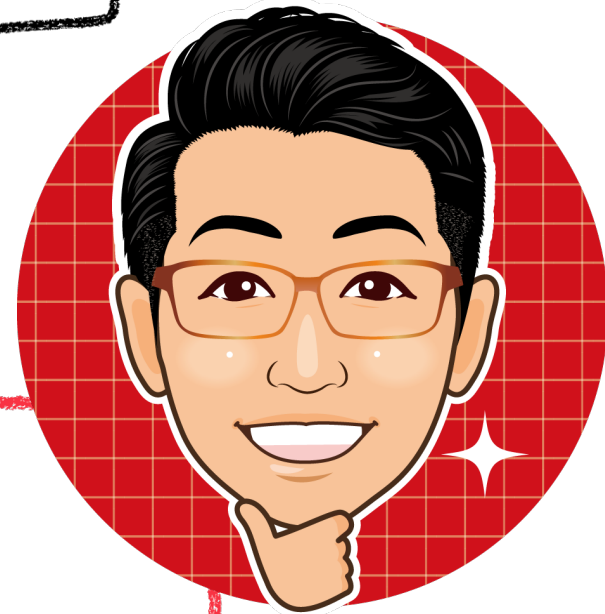
との交点の個数を考えよう

$$y' = 3x^2 - 3$$

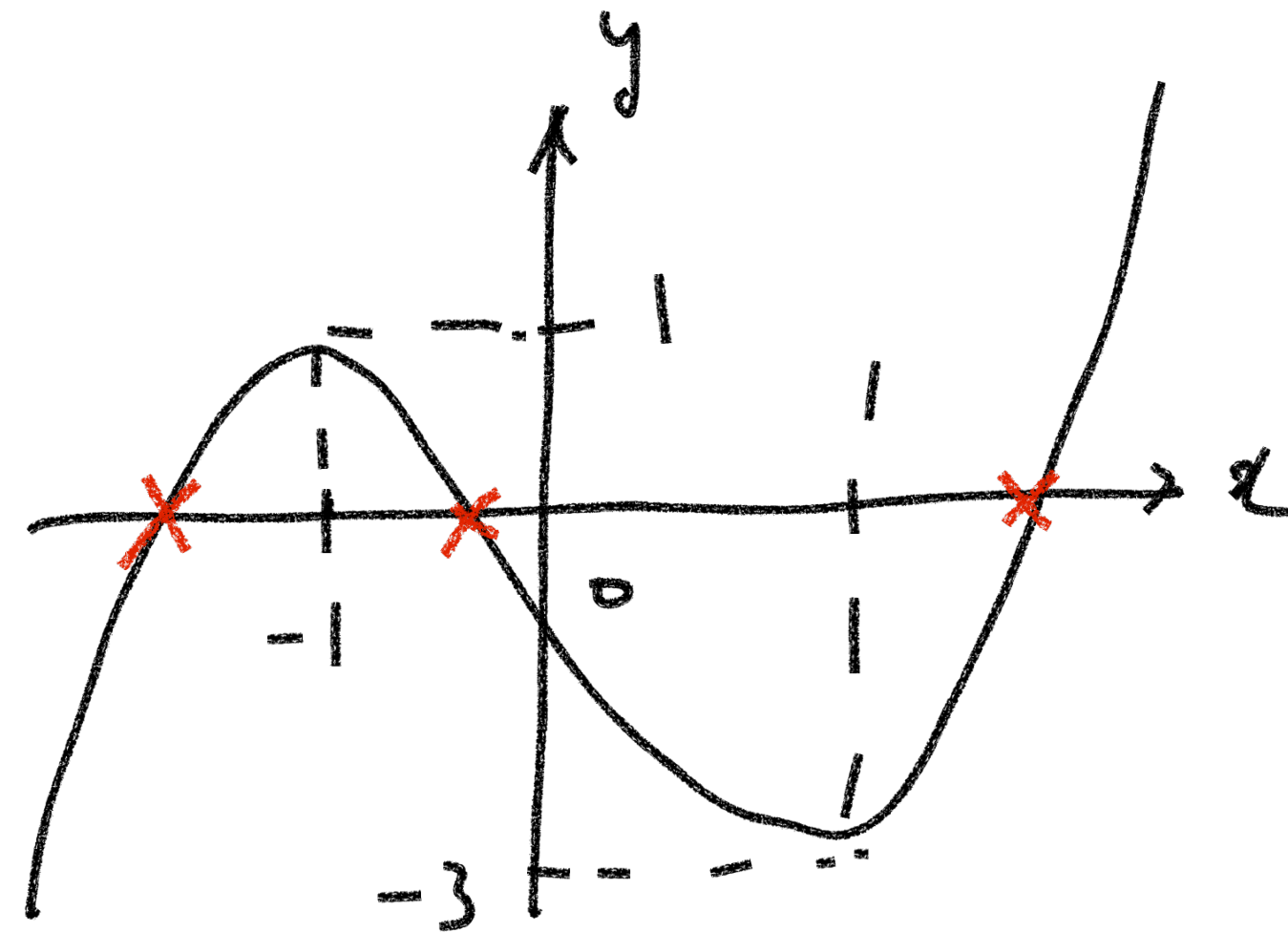
$$= 3(x+1)(x-1)$$

$$y' = 0 \quad x > x >$$

$$x = \pm 1$$



| | | | | | |
|------|-----|----|-----|----|-----|
| x | ... | -1 | ... | 1 | ... |
| y' | + | 0 | - | 0 | + |
| y | ↗ | 1 | ↘ | -3 | ↗ |

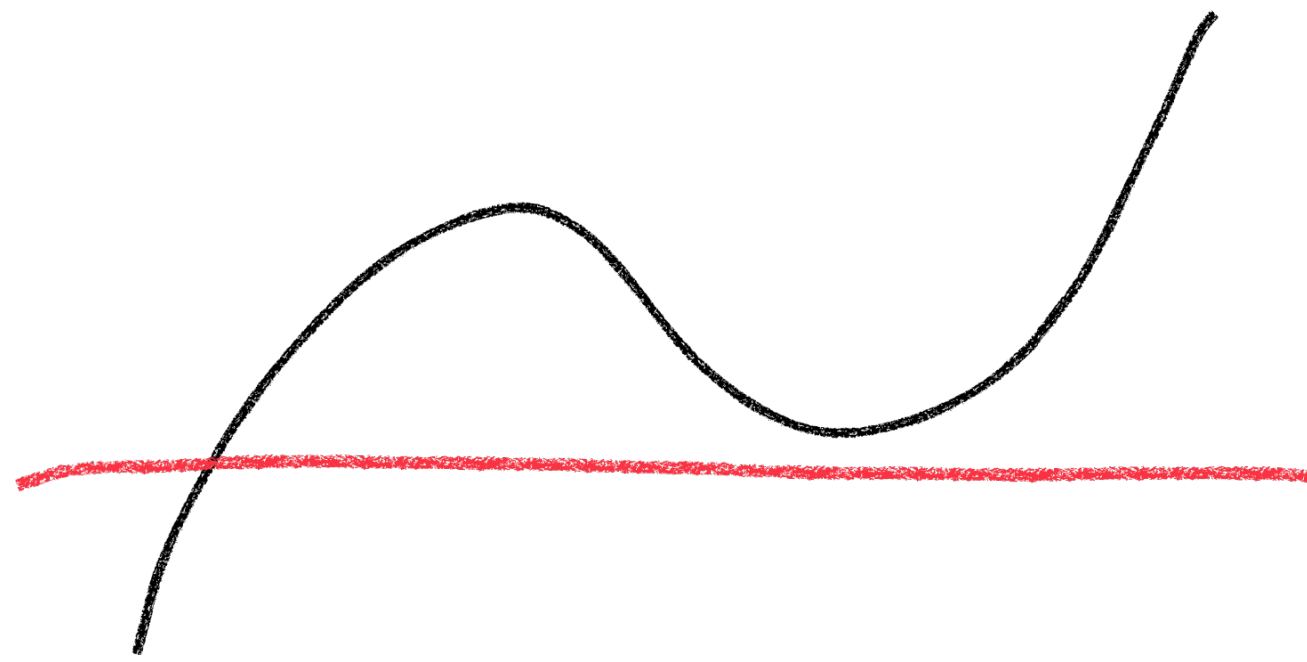


異なる実数解の個数 3個

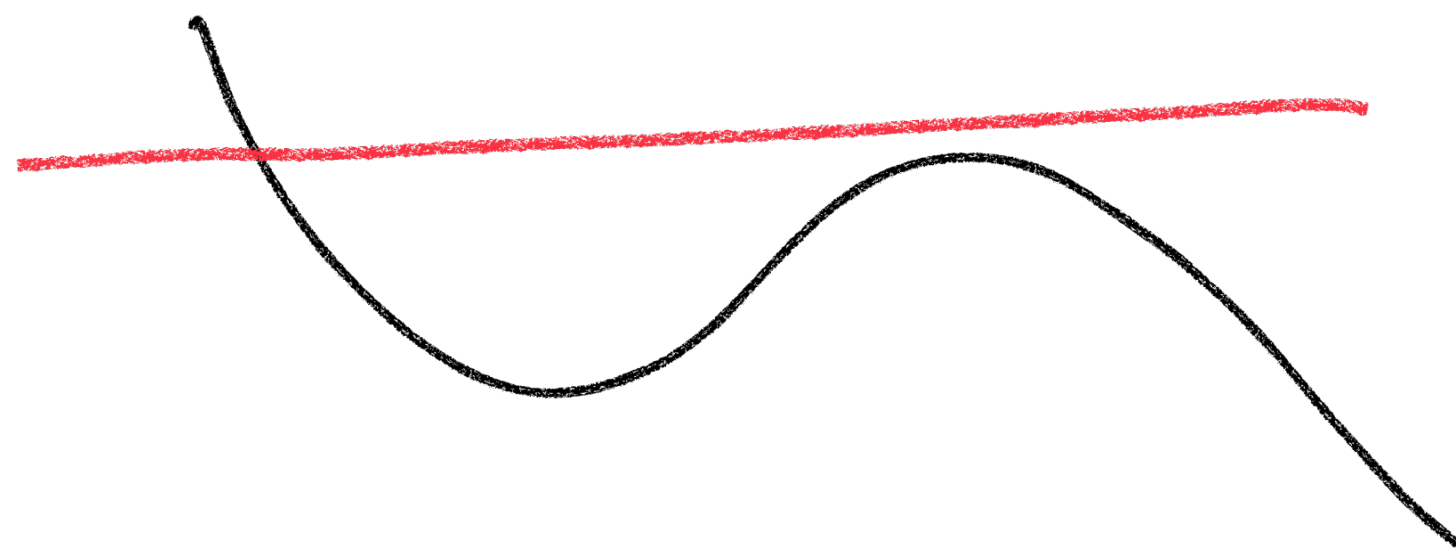
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3次関数の形

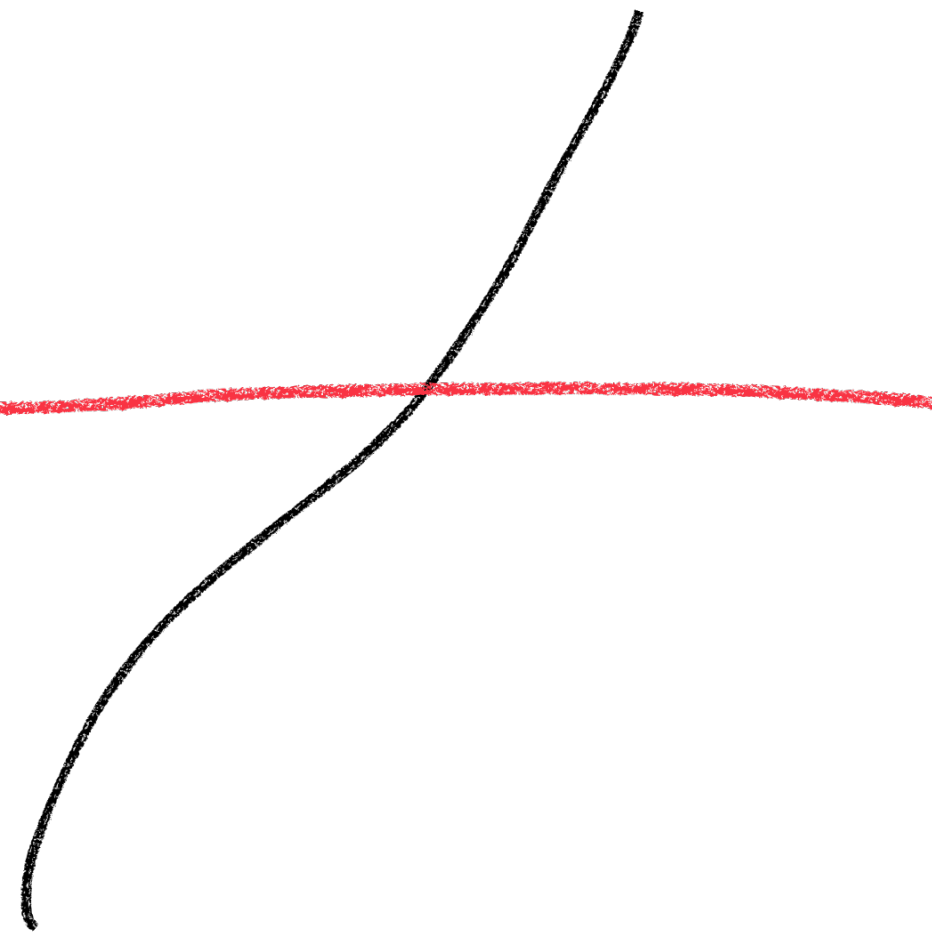
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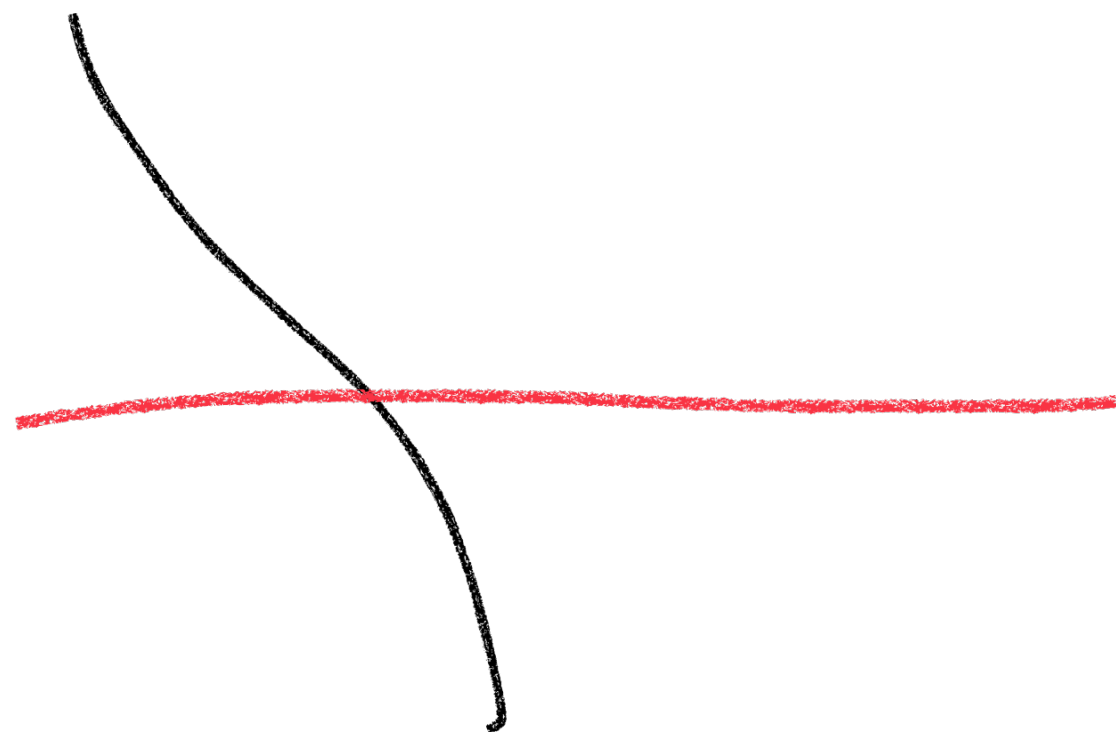
②



③



④



授業中に考えましょう！！