数学Ⅱ
第６章　微分法と積分法
関数の微分①

＜復習＞

$$(x^n)' = nx^{n-1}$$

$$(c)' = 0$$
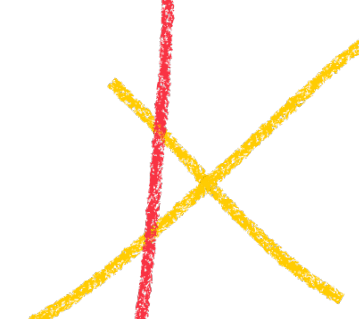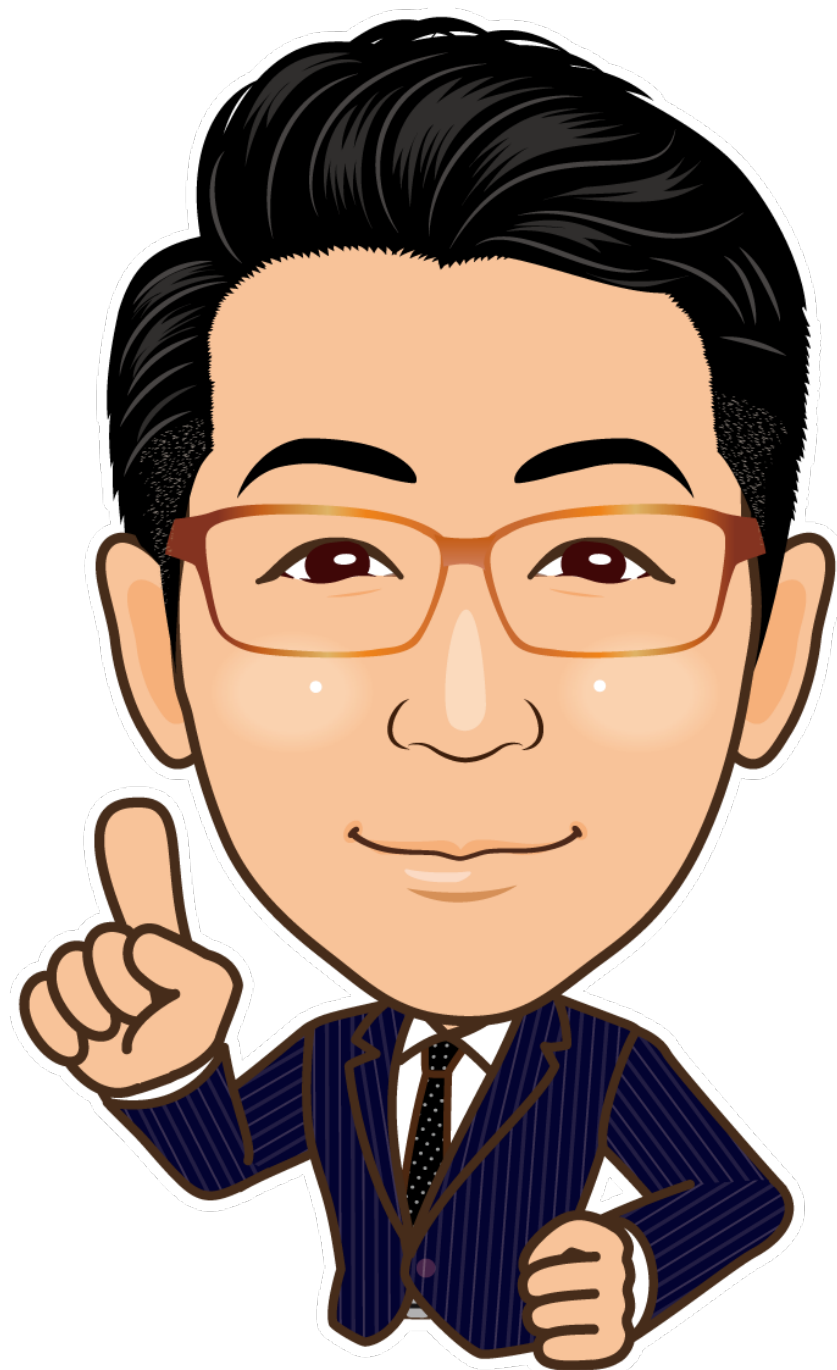
＜性質＞

k は 定数

① $y = k f_{(x)}$ $\qquad y' = k f'_{(x)}$

② $y = f_{(x)} + g_{(x)}$ $\qquad y' = f'_{(x)} + g'_{(x)}$

③ $y = f_{(x)} - g_{(x)}$ $\qquad y' = f'_{(x)} - g_{(x)}'$

④ $y = f_{(x)} \times g_{(x)}$ $\qquad y' = f'_{(x)} \times g'_{(x)}$

$$y = f(x) + g(x)$$

$$y' = \lim_{h \to 0} \left\{ \frac{f(x+h) + g(x+h) - (f(x) + g(x))}{h} \right\}$$

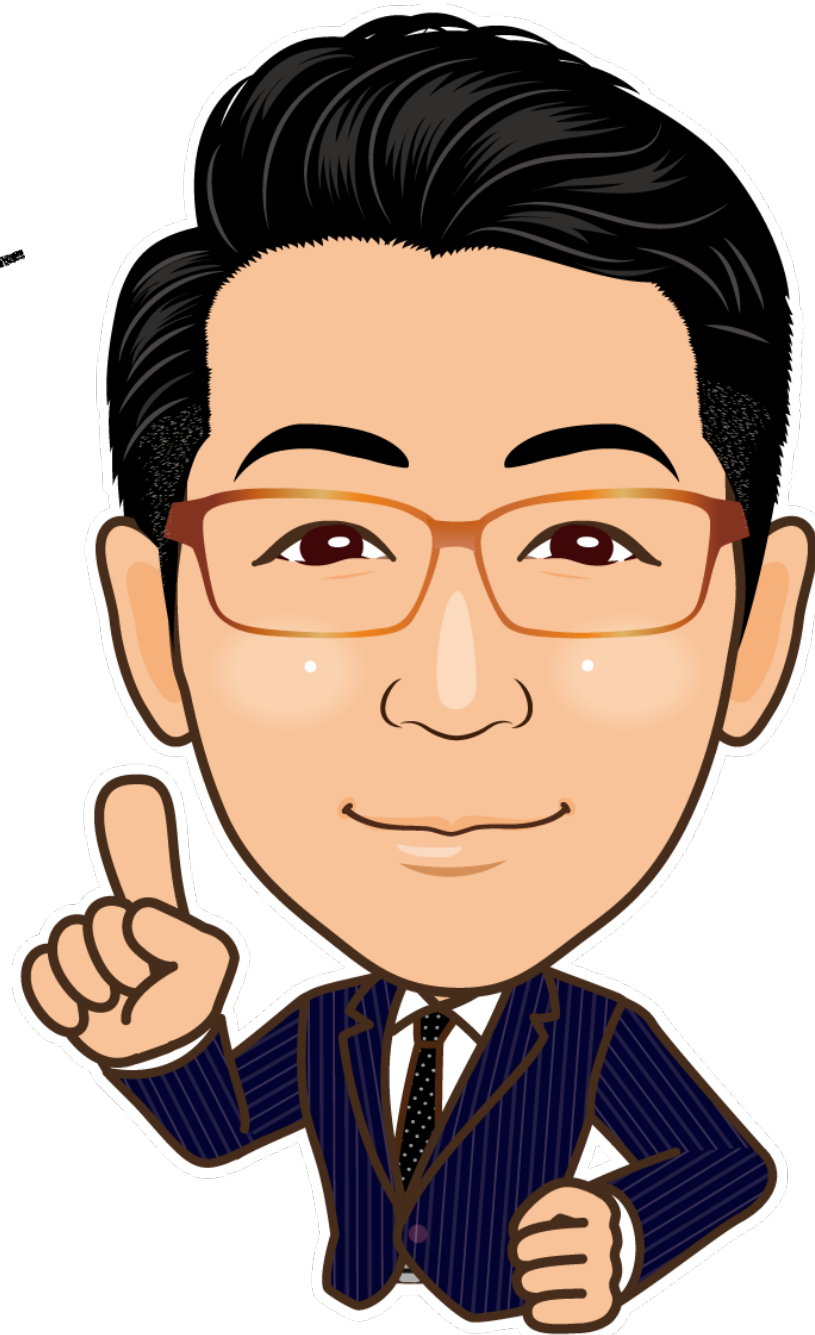$$= \lim_{h \to 0} \left(\frac{f(x+h) - f(x)}{h} + \frac{g(x+h) - g(x)}{h} \right)$$

$$= \underline{\underline{f'(x) + g'(x)}}$$

(ex)

$$y = 3x^2 - 4x + 2$$

$$y' = 3 \times 2x - 4$$

$$y' = 6x - 4$$

$$y = (x+2)(x+3)$$

$$y = x^2 + 5x + 6$$

$$y' = 2x + 5$$