

1

• $f(x) = x^2$: $f'(x) = 2x$. (10)

• x_1, x_2, \dots, x_n , f_i , $f_1 + f_2 + \dots + f_n = 1$ (3)

) $x_i, i=1, 2, \dots, n$; (3)

) f_i $x_i, i=1, 2, \dots, n$; (3)

) $f_1 + f_2 + \dots + f_n = 1$ (3)

• $f(x) = \frac{1}{4}(x-1)^4$ $f'(x) = 27$, $x = 1$ (6)

2

• (x_i) : f_i

x_i	f_i
	0,15
150	0,30
	0,35

) f_i x_i (12)

- $f(x) = \frac{x^2 + 3x - 10}{x - 2}$
-) $\lim_{x \rightarrow 1} f(x)$ $\lim_{x \rightarrow 2} f(x)$ $f(x)$.
-) $\lim_{x \rightarrow 1} f(x)$ $\lim_{x \rightarrow 2} f(x)$ $f(x)$
-) $(2, +\infty)$ (μ) **13)**
-
- 3**

- $f(x) = \frac{3x^2}{4x^2 + 5}$, $x \in \mathbb{R}$.
-) $\lim_{x \rightarrow 0} f(x)$ $f(x)$ (μ) **4)**
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-) $\lim_{x \rightarrow 0} f(x)$ (μ) $A(0, f(0))$ **5)**
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- 4**

$$f(x) = \begin{cases} \frac{x^2 - 1}{x - 1}, & x \neq 1 \\ + - 2, & x = 1 \end{cases}, \quad x \in \mathbb{R}$$

-) $f(x)$ $x_0 = 1$ $+ = 4$ (μ) **12)**
-) $f'(1) = 2 +$ $: \alpha = -3$ $= 7$ (μ) **13)**