$$f(x) = sen(x)$$

$$f'(x) = cos(x)$$

$$f''(x) = -sen(x)$$

$$f'''(x) = -cos(x)$$

$$f^{(4)}(x) = -(-sen(x))$$
$$f^{(4)}(x) = sen(x) \; //$$

② $f(x) = x^5 + x^2 + 1$

$$f'(x) = 5x^4 + 2x$$
$$f''(x) = 20x^3 + 2$$
$$f'''(x) = 60x^2$$
$$f^{(4)} = 120x$$

⑤
$$f(x) = e^x$$

$$f'(x) = e^x$$

$$f''(x) = e^x$$

$$f'''(x) = e^x$$

$$f^{(4)}(x) = e^x$$

⑥ $f(x) = x$

$$f'(x) = 1$$

$$f''(x) = 0$$

$$f'''(x) = 0$$

$$f^{(4)}(x) = 0$$