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**Nombre del trabajo mapa
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Grupo: A.

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Enfermería 3er Semestre "A"

Derivadas

$$\textcircled{1} f(x) = 5$$

$$f'(x) = \underline{\underline{0}}$$

$$\textcircled{2} f(x) = -2x$$

$$f'(x) = (-2)(1) = \underline{\underline{-2}}$$

$$\textcircled{3} f(x) = -2x + 2$$

$$f'(x) = (-2)(1) + 0 = \underline{\underline{-2}}$$

$$\textcircled{4} f(x) = -2x^2 - 5$$

$$f'(x) = (2)(-2+1)^{2-1} - 0$$

$$f'(x) = -4x$$

$$\textcircled{5} f(x) = 2x^4 + x^3 - x^2 + 4$$

$$f'(x) = 8x^3 + 3x^2 - 2x + 0$$

$$f'(x) = 8x^3 + 3x^2 - 2x$$

$$\textcircled{6} f(x) = \frac{x^3 + 2}{3}$$

$$f'(x) = \frac{1}{3} \frac{d}{dx} x^3 + 2$$

$$f'(x) = \frac{1}{3} 3x^2 + 0$$

$$f'(x) = \underline{\underline{\frac{1}{3} 3x^2}}$$

$$\textcircled{7} f(x) = \frac{1}{3x^2}$$

$$f'(x) = \frac{-1}{(3x^2)^2} \frac{d}{dx} 3x^2$$

$$f'(x) = \frac{-1}{9x^4} \cdot 6x$$

$$f'(x) = \underline{\underline{-\frac{6x}{9x^4}}}$$

$$\textcircled{8} f(x) = \frac{x+1}{x-1}$$

$$f'(x) = \frac{x-1 \frac{d}{dx} x+1 - x+1 \frac{d}{dx} x-1}{(x-1)^2}$$

$$f'(x) = \frac{x-1 - (x+1)}{(x-1)^2} \rightarrow$$

$$f'(x) = \underline{\underline{\frac{-2}{x^2 - 2x + 1}}}$$

$$\textcircled{9} f(x) = \overbrace{(5x^2 - 3)}^u \overbrace{(x^2 + x + 4)}^v$$

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$$f'(x) = 5x^2 - 3 \frac{d}{dx} x^2 + x + 4 + x^2 + x + 4 \frac{d}{dx} 5x^2 - 3$$

$$f'(x) = (5x^2 - 3)(2x + 1) + (x^2 + x + 4)(10x)$$

$$f'(x) = 10x^3 + 5x^2 - 6x - 3 + 10x^3 + 10x^2 + 40x$$

$$\underline{\underline{f'(x) = 20x^3 + 15x^2 - 34x - 3}}$$

$$\textcircled{10} f(x) = \frac{5}{x^5}$$

$$f'(x) = -\frac{5}{(x^5)^2} \frac{d}{dx} x^5$$

$$f'(x) = \left(-\frac{5}{x^{10}}\right)(5x^4)$$

$$\underline{\underline{f'(x) = -\frac{25x^4}{x^{10}}}}$$

$$\textcircled{11} f(x) = \frac{5}{x^5} + \frac{3}{x^2}$$

$$f'(x) = -\frac{25x^4}{x^{10}} + \left(-\frac{3}{(x^2)^2} \frac{d}{dx} x^2\right)$$

$$f'(x) = -\frac{25x^4}{x^{10}} + \frac{6x}{x^4}$$

$$\textcircled{12} f(x) = \sqrt{x} \Rightarrow \frac{1}{2\sqrt{x}} \frac{d}{dx} x$$
$$f'(x) = \frac{1}{2\sqrt{x}}$$

$$\textcircled{13} f(x) = \frac{1}{\sqrt{x}}$$
$$f'(x) = -\frac{1}{(\sqrt{x})^2} \frac{d}{dx} \sqrt{x}$$
$$f'(x) = -\frac{1}{x} \cdot \frac{1}{2\sqrt{x}}$$
$$f'(x) = \frac{-1}{2\sqrt{x} x}$$

$$\textcircled{14} f(x) = \frac{1}{x\sqrt{x}}$$
$$f'(x) = -\frac{1}{(x\sqrt{x})^2} \frac{d}{dx} x\sqrt{x}$$
$$f'(x) = -\frac{1}{(x^{3/2})^2} \frac{d}{dx} x^{3/2}$$
$$f'(x) = -\frac{1}{x^{9/4}} \cdot \frac{3}{2} \sqrt{x}$$
$$f'(x) = -\frac{3\sqrt{x}}{2x^{9/4}}$$

$$\textcircled{15} f(x) = \sqrt[3]{x^2} + \sqrt{x}$$
$$f'(x) = \frac{1}{3\sqrt[3]{x^2 \cdot 2}} \frac{d}{dx} x^2 + \frac{1}{2\sqrt{x}}$$

$$f'(x) = \frac{2x}{3\sqrt[3]{x^4}} + \frac{1}{2\sqrt{x}}$$

$$\textcircled{16} f(x) = (x^2 + 3x - 2)^4$$
$$f'(x) = 4(x^2 + 3x - 2)^3 \frac{d}{dx} (x^2 + 3x - 2) \rightarrow$$
$$f'(x) = 4(x^2 + 3x - 2)^3 (2x + 3)$$

$$\textcircled{17} f(x) = \sqrt{x^2 - 2x + 3}$$
$$f'(x) = \frac{1}{2\sqrt{u}} \frac{d}{dx} u$$
$$f'(x) = \frac{1}{2\sqrt{x^2 - 2x + 3}} \cdot (2x - 2) \rightarrow$$
$$f'(x) = \frac{2x - 2}{2\sqrt{x^2 - 2x + 3}}$$

$$\textcircled{18} f(x) = \sqrt[4]{x^5 - x^3 - 2}$$
$$f'(x) = \frac{1}{4\sqrt[4]{u^3}} \frac{d}{dx} u$$
$$f'(x) = \frac{1}{4\sqrt[4]{(x^5 - x^3 - 2)^3}} (5x^4 - 3x^2) \rightarrow$$
$$f'(x) = \frac{5x^4 - 3x^2}{4\sqrt[4]{(x^5 - x^3 - 2)^3}}$$