

Math 7A PRACTICE PROBLEMS 2

$$f(x) = \ln(3x^5 - 2x^3 + 5x + 1)$$

$$f(x) = \frac{15x^4 - 6x^2 + 5}{3x^5 - 2x^3 + 5x + 1}$$

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

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

$$A = 4x^7 - \frac{2\tan x}{x}$$

$$A = 28x^6 - \frac{2x \sec^2 x - 2\tan x}{x^2}$$

$$S = 3t^4 - \sqrt{\cos t}$$

$$S = 12t^3 + \frac{\sin t}{2\sqrt{\cos t}}$$

$$L = (\sin s)(s^3 + 3)^7$$

$$L = (\cos s)(s^3 + 3)^7 + 21(s^3 + 3)^6 (s^2)(\sin s)$$

$$P = \sin^{-1}(a^4 + 2a^2 + 1)^{10}$$

$$P = \frac{10(a^4 + 2a^2 + 1)^9 (4a^3 + 4a)}{\sqrt{1 - (a^4 + 2a^2 + 1)^{20}}}$$

$$R = y \log_3 \sqrt{(y^3 - 3)}$$

$$R = \frac{1}{2} \log_3 (y^3 - 3) + \frac{3y^3}{(y^3 - 3) \ln 3}$$

$$V = \tan^{-1}(t^2 + 7)$$

$$V = \frac{2t}{1 + (t^2 + 7)^2}$$

$$s = \ln \left[\tan^{-1}(1/x) \right]$$

$$S = -\frac{\frac{1}{x^2} \cdot 1 + \frac{1}{x^2}^{-1}}{(\tan^{-1}(1/x))} = \frac{-1}{(1+x^2)(\tan^{-1}(1/x))}$$