

(1) [3 points] Differentiate: $y = \frac{x^4 - 2x + 5}{\sqrt{x}}$

(2) [4 points] Differentiate: $y = \frac{\cos x}{x^3}$

(3) [4 points] Determine $\frac{dy}{dx}$: $y = (5x - 2)^4(7x^2 + 3)^{-2}$

(4) [4 points] Find $f'(x)$: $f(x) = \sin(x^3 \tan x)$