

$$3) f(t) = \frac{\cos t}{t^3}$$

$$f'(t) = \frac{t^3(-\sin t) - (\cos t)(3t^2)}{(t^3)^2}$$

$$f'(t) = \frac{-t^3 \sin t - 3t^2 \cos t}{t^6}$$

$$f'(t) = \frac{-t^2(t \sin t + 3 \cos t)}{t^6}$$

$$4) f(x) = \frac{c^2 - x^2}{c^2 + x^2}$$

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

$$5) f(x) = \frac{\sec x}{x}$$

$$f'(x) = \frac{x(\sec x \tan x) - (\sec x)(1)}{x^2}$$