1. (4 points) Find the $x$-value for each point on the graph of $f(x) = x^3 - 7x^2 + 5x$ where the line tangent to the curve is parallel to the line $y = 10x - 3$. 
2. (2 points each) Using Leibniz notation (i.e., \( \frac{dy}{dx} \), \( \frac{dP}{dt} \), etc.), find derivatives for each of the following functions. For part (b) simplify your answer.

(a) \( r = 2x^3 + 5xe^x + \ln 3 \)

(b) \( w = \left( \frac{\sqrt[4]{x}}{x\sqrt{x}} \right)^{-6} \)

(c) \( y = \frac{2t + t^2}{t^5 + 3} \)