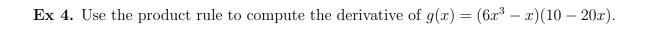**Ex 1.** What is the equation of the line tangent to $f(x) = x^{11} - 2x^7 + 20x^2 + \frac{1}{5}x - 8$ at $x = 0$?

Ex 2. Find the equation of the line tangent to the graph of $f(x) = \sqrt{x}$ at $(4, 2)$.

Ex 3. Find all values of x such that the tangent line of $f(x) = x^5 - 5x^4$ is horizontal.

Ex 4. Use the product rule to compute the derivative of $g(x) = (6x^3 - x)(10 - 20x)$.

Ex 5. What is the second derivative of the function $f(x)^2$ in terms of $f(x)$ and $f'(x)$?

Ex 6. Give an example of a function $f(x)$ such that $f'(x) = 2x^2 + 3$.