Show all work to receive full credit. Supply explanations when necessary.

1. (4 points) Let $f(x) = x^5 + 7x + 2$. Compute $(f^{-1})'(10)$.

2. (3 points) Determine the slope of the line tangent to the graph of $f(x) = xe^{x^3-2x}$ at the point where x = 1.

3. (3 points) Integrate: $\int \frac{5e^{1/x}}{x^2} dx$