Derivatives using Rules

1. Find $f'(x)$ for

   (a) $f(x) = x^{10} + 1/x$

   (b) $f(x) = 6 + 2/x^3$

   (c) $f(x) = 7e^x - 2\sqrt{x}$.

2. Find the equation of the tangent line to $f(x) = x^4 + e^x$ at $x = 1$.

3. At what values of x is the tangent line to

$$f(x) = \frac{x^3}{3} - \frac{x^2}{2} - 12x$$

   horizontal?