SYMPLIT

1. Differentiate the function $f(x) = e^x x^2$

2. Differentiate the function $f(x) = 3x - 4x(e^x + x)$

3. Differentiate the function $f(x) = (x + e^x)(x - e^x)$

4. Differentiate the function $f(x) = \dfrac{x^3}{x^2 + 1}$

5. Differentiate the function $f(x) = \dfrac{e^x - x^2}{e^x + x^2}$

6. Differentiate the function $f(x) = \dfrac{x^3 - x}{x^4 + x^2}$

7. Differentiate the function $f(x) = \dfrac{e^x \sqrt{x}}{x^3 - 7}$

8. Differential the function $f(x) = \dfrac{x^2}{e^x(2 + x)}$

9. Find an equation of the tangent line to the curve $y = 4x^2 e^x$ at the point $(0, 0)$

10. Find an equation of the tangent line to the curve $y = \dfrac{x^3 - e^x}{x^2 + e^x}$ at the point $(0, -1)$