

1. Compute the derivative of

$$f(x) = (x^3 + 2x)e^x.$$

2. Find the equation of the line tangent to the graph of the function

$$f(x) = \frac{2-x}{1+x}$$

at the point $(1, f(1))$.

- (a) Compute the derivative $f'(x)$ and compute $f'(1)$.
- (b) Write out the equation of the tangent line and check by graphing f and the tangent line.