Here are some functions. Find their derivatives.

1. \( \frac{e^x}{1+e^x} \)
2. \( a^{x^2} \)
3. \( \arccos x \)

Here are some more functions. Sketch them, noting features such as zeroes, divergences, and the behavior for \( x \to \pm \infty \).

1. \( f(x) = \tanh x \)
2. \( f(x) = (x^2 - 1)e^{-x} \)
3. \( f(x) = (\sin x)e^{-x} \)
4. \( f(x) = (x + 3)/(x - 1) \)