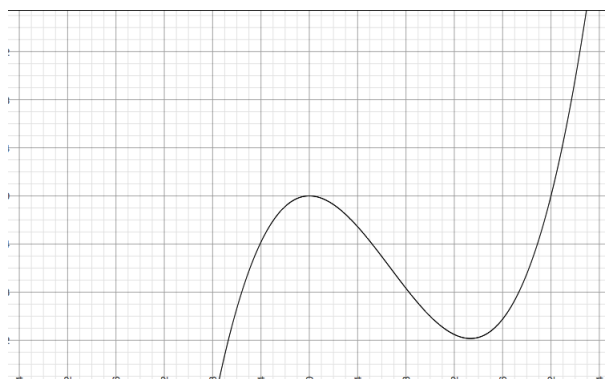


1. Find equation of the normal line to the function $f(x) = xe^x$ at $x = -1$.

2. The graph of $f(x)$ is given as follow. Sketch a graph corresponding to $f'(x)$.



3. Find the point at which the tangent line to the function $y = x^2$ for $x = 2$ intercepts x-axis.

Hint: In order to find the equation of a line what you need is the slope and one point. The point $(2, 2^2)$ is given. Use the concept of derivation to find the slope of the tangent line. After finding the equation of the tangent line check at which point this line crosses x-axis.