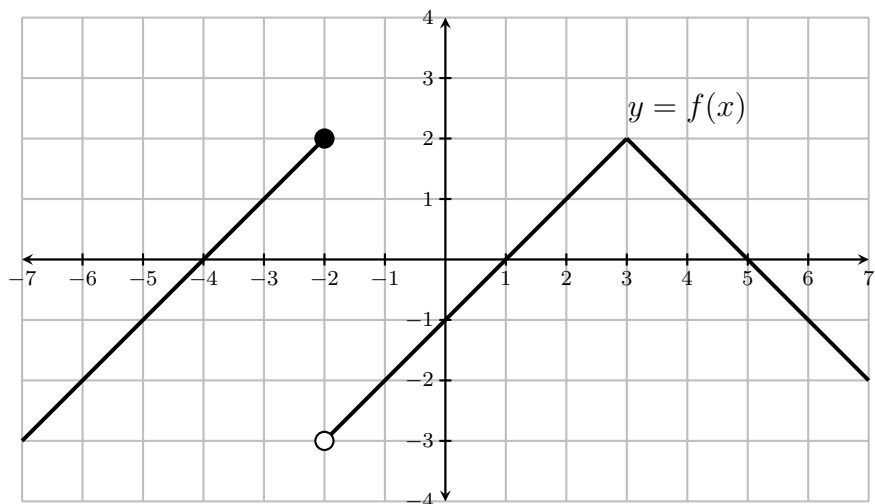1. Consider the functions $f(x) = e^x + \dfrac{x^3}{3}$ and $g(x) = e^x + x$. Find all x for which the tangent line to the graph of $y=f(x)$ at $(x, f(x))$ is parallel to the tangent line to the graph of $y=g(x)$ at $(x, g(x))$.

2. The graph of a function $f(x)$ is shown below.

   (a) Using the same coordinate axis, sketch the graph of its derivative $f'(x)$

   (b) At which x values is $f(x)$ **not** differentiable?

$y = f(x)$

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