4. (40 points) The graph of $f^{\prime}(x)$ is shown in the graph below. Given the fact that $f(0)=5$, sketch a rough graph of $f(x)$ on the blank axes provided for the domain [ 0,10 ]. You should indicate all critical points, inflection points, and function values (if applicable).


|  | $f(x)$ |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

