7. [11 points] Below is a picture of the function $f(x)$, which is piecewise linear. On the axes provided, sketch an antiderivative, $F(x)$, of the function $f(x)$, with $F(2)=-1$. To receive full credit:

- Label the points on the graph of $F(x)$ where $x=0,1,2,3,4$, including $y$-coordinates.
- Be sure the concavity and local extrema on the graph of $F(x)$ are clear.



