1. (5 points) On the axes below, graph the function

\[ f(x) = \begin{cases} 
-2 & \text{if } -4 \leq x \leq -2 \\
x & \text{if } -2 \leq x \leq 0 \\
-(x - 2)^2 + 4 & \text{if } 0 \leq x \leq 4 
\end{cases} \]
2. (5 points) Let \( f(x) = -0.2x^2 - 3x + c. \)

(a) What is the \( x \)-coordinate of the vertex?

(b) Find \( c \) so that \( f(x) \) has a maximum value of -225.