6. [11 points] The graph of \( y = F(x) \) is shown below on the left.

\[ \begin{align*}
\text{Graph of } y &= F(x) \\
\text{Graph of } y &= F^{-1}(x)
\end{align*} \]

a. [4 points] Draw the graph of \( y = F^{-1}(x) \) on the provided axes.

b. [4 points] Write a piecewise formula for \( F(x) \). (NOT for \( F^{-1}(x) \))

\[ F(x) = \begin{cases} 
\text{for } & \\
\text{for } & 
\end{cases} \]

c. [3 points] Let \( G(w) = \sqrt{w+1} \) with domain \((0, 8)\), and let \( H(w) = F(G(w)) \). What is the range for \( H(w) \) and \( H^{-1}(y) \)? Express your answers using interval notation.

\[ \text{The range for } H(w) \text{ is } \] 

\[ \text{The range for } H^{-1}(y) \text{ is } \]