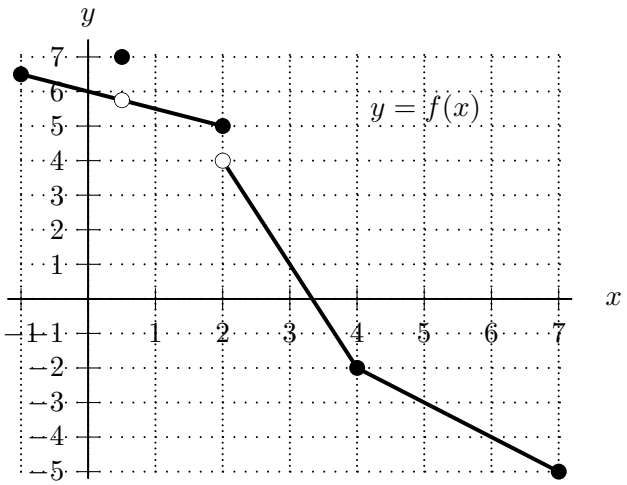
2. [11 points]

Shown to the right is the graph of a function $f(x)$.



Note that you are not required to show your work on this problem. However, limited partial credit may be awarded based on work shown.

Find each of the following values. If the value does not exist, write DOES NOT EXIST.

a. [3 points] Let $h(x) = f(3x + 1)$. Find $h'(1)$.

Answer: $h'(1) =$ _____

b. [3 points] Let $k(x) = e^{f'(x)}$. Find $k'(6)$.

Answer: $k'(6) =$ _____

c. [2 points] Find $(f^{-1})'(0)$.

Answer: $(f^{-1})'(0) =$ _____

d. [3 points] Let $j(x) = \dfrac{f(2x+1)}{x+1}$. Find $j'(1)$.

Answer: $j'(1) =$ _____