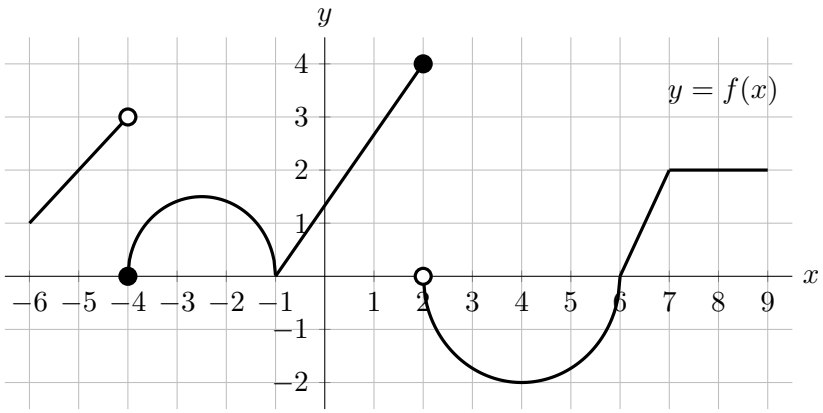
1. [10 points] The graph of $f(x)$ shown below consists of lines and semicircles.



For the following problems, you do not need to show work. If there is not enough information, write "NEI".

a. [2 points] For which values of $-6 < x < 9$ is the function $f(x)$ discontinuous?

Answer: $x =$ _____

b. [2 points] For which values of $0 < x < 9$ does $f(x)$ appear to not be differentiable?

Answer: $x =$ _____

c. [2 points] Find $\lim_{h \to 0^-} f(-4+h) - f(-4)$.

Answer: $\lim_{h \to 0^-} f(-4+h) - f(-4) =$ _____

d. [2 points] Find $\lim_{x \to \infty} f\left(\frac{2x}{x+1}\right)$.

Answer: $\lim_{x \to \infty} f\left(\frac{2x}{x+1}\right) =$ _____

e. [2 points] Let $g(x) = \ln(4 + f(x))$. Find $g'(6.5)$.

Answer: $g'(6.5) =$ _____

