1. (1 pt) Let \( F \) be the function below.

Evaluate each of the following expressions.

Note: Enter 'DNE' if the limit does not exist or is not defined.

a) \( \lim_{{x \to 1^-}} F(x) = \)
b) \( \lim_{{x \to 1^+}} F(x) = \)
c) \( F(-1) = \)
d) \( F(1) = \)
e) \( \lim_{{x \to 3^-}} F(x) = \)
f) \( \lim_{{x \to 3^+}} F(x) = \)
g) \( \lim_{{x \to 1}} F(x) = \)
h) \( \lim_{{x \to 3}} F(x) = \)
i) \( F(3) = \)

2. (1 pt) Below is an "oracle" function. An oracle function is a function presented interactively. When you type in an \( x \) value, and press the \(-\mathrm{f}->\) button and the value \( f(x) \) appears in the right hand window. There are three lines, so you can easily calculate three different values of the function at one time.

Determine the limits for the function \( f \) at 1.74.

\[
\begin{align*}
\lim_{{x \to 1.74^-}} f(x) &= \\
\lim_{{x \to 1.74^+}} f(x) &= \\
\end{align*}
\]

Are all of these values the same?: (Y or N) . If so then the function is \text{continuous} at 1.74

Are the left and right limits the same at 1.74?: (Y or N) . If so then this function is almost \text{continuous} and could be made \text{continuous} by redefining one value of the function namely

\( f(1.74) \).

3. (1 pt)

The graphs of \( f \) and \( g \) are given above. Use them to evaluate each quantity below. Write 'DNE' if the limit or value does not exist (or if it’s infinity).

- 1. \( \lim_{{x \to 1^-}} [f(g(x))] \)
- 2. \( f(3) + g(3) \)
- 3. \( \lim_{{x \to 1^+}} [f(x)/g(x)] \)
- 4. \( \lim_{{x \to 3^+}} [f(g(x))] \)