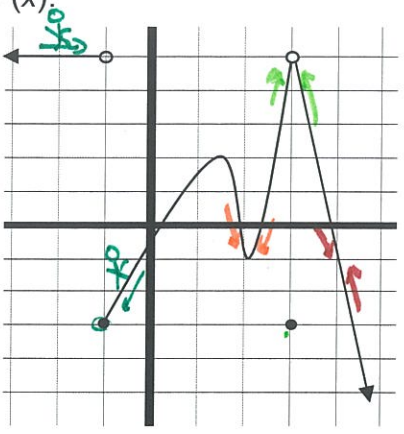
DATE: _____

low is a graph of the function $f(x)$.



ing the definition of continuity, explain why $f(x)$ is or is not continuous at ch of the following x-values.

$x = -1$

$f(-1) = -3$

$\lim_{x \to -1^-} f(x) = 5$

$\lim_{x \to -1^+} f(x) = -3$

$\neq$, so $\lim_{x \to -1} f(x)$ DNE

$\therefore$ f is not cont @ $x = -1$

$x = 2$

$f(2) = -1$

$\lim_{x \to 2^-} f(x) = -1$

$\lim_{x \to 2^+} f(x) = -1$

$=$, so $\lim_{x \to 2} f(x) = -1$

$\lim_{x \to 2} f(x) = f(2)$ $\therefore$ f is continuous @ $x = 2$

$x = 3$

$f(3) = -3$

$\lim_{x \to 3^-} f(x) = 5$

$\lim_{x \to 3^+} f(x) = 5$

$=$, so $\lim_{x \to 3} f(x) = 5$

$\lim_{x \to 3} f(x) \neq f(3)$ $\therefore$ f is not cont @ $x = 3$

$x = 4$

$f(4) = -1$

$\lim_{x \to 4^-} f(x) = -1$

$\lim_{x \to 4^+} f(x) = -1$

$=$, so $\lim_{x \to 4} f(x) = -1$

$\lim_{x \to 4} f(x) \neq f(4)$ $\therefore$, f is not cont. @ $x = -1$