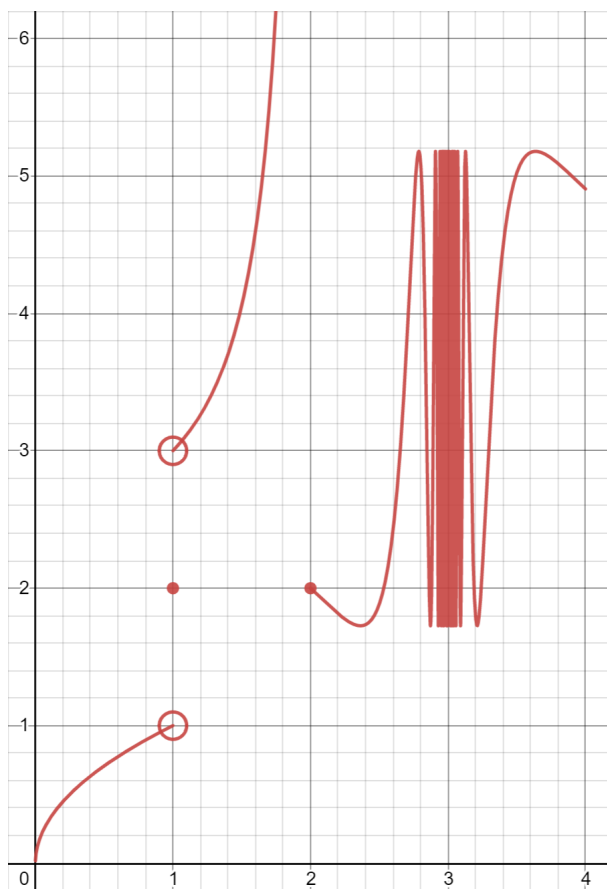


Math 221 Sec 003 Quiz 1 Solution

1. For each values of a displayed below, find the values of $f(a)$, $\lim_{x \rightarrow a^+} f(a)$, $\lim_{x \rightarrow a^-} f(a)$, and $\lim_{x \rightarrow a} f(a)$. (if DNE, find the types of DNE where necessary)



(a) $a = 1$

$$f(a) = 2, \lim_{x \rightarrow a^+} f(a) = 3, \lim_{x \rightarrow a^-} f(a) = 1, \lim_{x \rightarrow a} f(a) = DNE$$

(b) $a = 2$

$$f(a) = 2, \lim_{x \rightarrow a^+} f(a) = 2, \lim_{x \rightarrow a^-} f(a) = +\infty, \lim_{x \rightarrow a} f(a) = DNE$$

(c) $a = 3$

$$f(a) = UND, \lim_{x \rightarrow a^+} f(a) = DNE, \lim_{x \rightarrow a^-} f(a) = DNE, \lim_{x \rightarrow a} f(a) = DNE$$