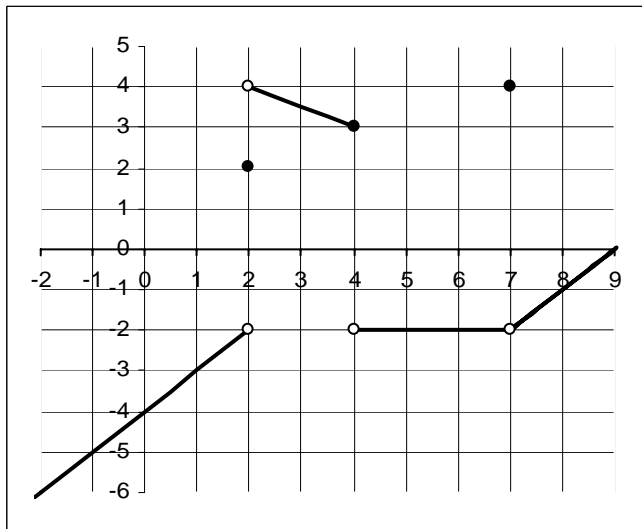


1. The function f has the graph shown. Using this graph, fill out the table below.



a	f(a)	$\lim_{x \rightarrow a^-} f(x)$	$\lim_{x \rightarrow a^+} f(x)$	$\lim_{x \rightarrow a} f(x)$
0				
2				
4				
7				

2. Let $f(x) = \frac{\ln(x) - \ln(6)}{x - 6}$, $a = 6$.

- (a) **Numerically** investigate $\lim_{x \rightarrow a^-} f(x)$ and $\lim_{x \rightarrow a^+} f(x)$ correct to four decimal places

- (b) Does $\lim_{x \rightarrow a} f(x)$ exist? If it does, state the value correct to four decimal places. If the limit does not exist, state why this is so.

3. Repeat problem #2 for $f(x) = \frac{\sqrt{x^2 - 6x + 9}}{2x - 6}$ and $a = 3$.