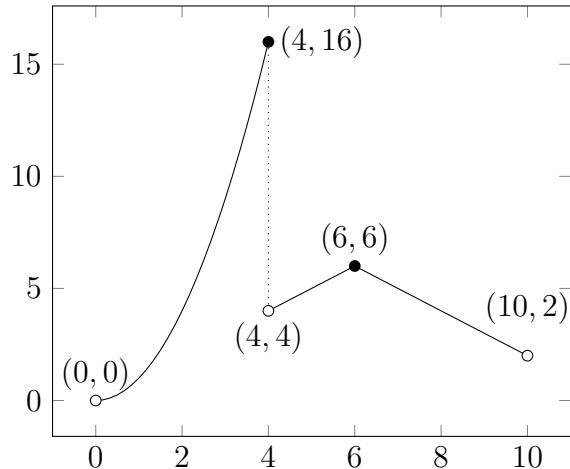


MA161 Quiz 5

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Problem 5.1. The graph of $f(x)$ for x between 0 and 10 is sketched below. Using this



graph, determine the following one-sided limits:

- (a) $\lim_{x \rightarrow 0^+} f(x)$, (d) $\lim_{x \rightarrow 6^-} f(x)$,
- (b) $\lim_{x \rightarrow 4^-} f(x)$, (e) $\lim_{x \rightarrow 6^+} f(x)$,
- (c) $\lim_{x \rightarrow 4^+} f(x)$, (f) $\lim_{x \rightarrow 10^-} f(x)$.

Problem 5.2. Given your answers from the previous problem, determine whether or not the following limits exist

- (a) $\lim_{x \rightarrow 4} f(x)$, (b) $\lim_{x \rightarrow 6} f(x)$.

Problem 5.3. Determine the infinite limits of the following

- (a) $\lim_{x \rightarrow 1^+} \frac{1}{x-1}$
- (b) $\lim_{x \rightarrow 1^-} \frac{1}{x-1}$
- (c) $\lim_{x \rightarrow 1^+} \frac{1}{x^2-1}$
- (d) $\lim_{x \rightarrow 1^-} \frac{1}{x^2-1}$