

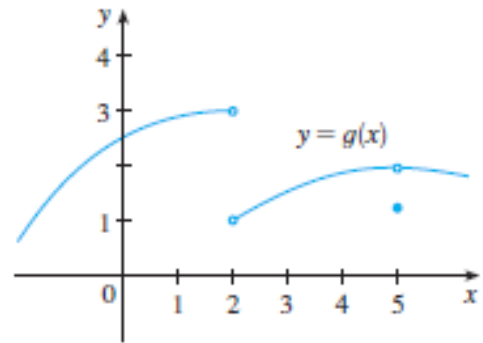
A. Using the graph to the right, evaluate:

a.  $\lim_{x \rightarrow 2^-} f(x)$

b.  $\lim_{x \rightarrow 2^+} f(x)$

c.  $\lim_{x \rightarrow 5} f(x)$

d.  $f(5)$



B. Evaluate the following limits. SHOW ALL NECESSARY WORKINGS

1.  $\lim_{x \rightarrow 1} [2 + 3(x-4)^2]$

2.  $\lim_{x \rightarrow -2} \frac{x^2 - 2x - 8}{x^2 + 5x + 6}$

3.  $\lim_{x \rightarrow 3} \frac{\sqrt{x-2} - 1}{x-3}$

4.  $\lim_{x \rightarrow -1} \frac{\frac{x}{x+3} + \frac{1}{2}}{x+1}$

$$5. \quad \lim_{x \rightarrow 3} \frac{4 - \sqrt{x^2 + 7}}{x^2 - 9}$$

$$6. \quad \lim_{x \rightarrow 3} \frac{2x^2 - 7x - 3}{x^3 - 27}$$

$$7. \quad \lim_{h \rightarrow 4^-} \frac{3x - 12}{|4 - x|}$$

$$8. \quad \lim_{h \rightarrow 4^-} \frac{2x + 5}{x - 4}$$

$$9. \quad \lim_{h \rightarrow \infty} \frac{5x^2 - 3x + 1}{2x^2 + x}$$

$$10. \quad \lim_{h \rightarrow -\infty} \frac{3x + 1}{\sqrt{49x^2 + x - 1}}$$

$$11. \quad f(x) = \begin{cases} x + 2, & x \leq 3 \\ x^2 - 1, & x > 3 \end{cases}$$

$$\lim_{h \rightarrow 3} f(x)$$