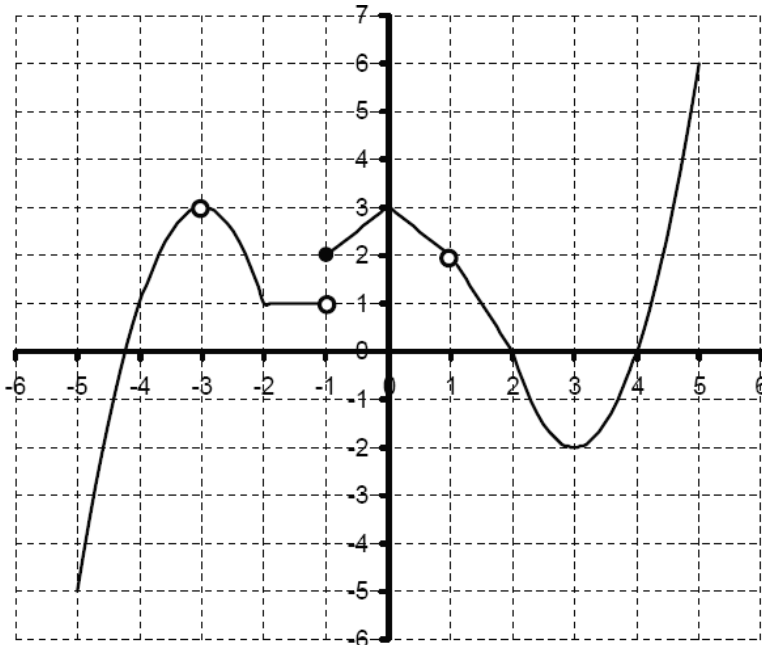


MCS21 Homework 7

1. The graph of $f(x)$ is shown below.



a. $\lim_{x \rightarrow -3^-} f(x) =$

e. $f(-1) =$

b. $\lim_{x \rightarrow -3^+} f(x) =$

f. $f(1) =$

c. $\lim_{x \rightarrow -1} f(x) =$

g. $\lim_{x \rightarrow -\infty} f(x)$

d. $\lim_{x \rightarrow 1} f(x) =$

h. $\lim_{x \rightarrow \infty} f(x)$

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

6. $\lim_{y \rightarrow 0} \frac{y^3 - 7y}{y^3}$

3. $\lim_{x \rightarrow 8} \frac{3 - \sqrt{x+1}}{x - 2}$

7. $\lim_{t \rightarrow 4} \frac{t - \sqrt{3t+4}}{4 - t} =$

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

8. $\lim_{x \rightarrow -\infty} \frac{\sqrt{4x^8 - 8x}}{10 - 3x}$

5. $\lim_{z \rightarrow \infty} \frac{4z^2 + z^6}{1 - 5z^3}$

9. $\lim_{x \rightarrow -2} \frac{\frac{1}{x} + \frac{1}{2}}{x^3 + 8}$