(1) Evaluate the limit if it exists.

(a) \(\lim_{x \to 2} (x^4 - 5x^3 + 1)\)

(b) \(\lim_{t \to 0} \frac{(4 + t)^2 - 16}{t + 1}\)

(c) \(\lim_{x \to 1} \frac{x^2 + 9x - 10}{x^2 + 3x - 4}\)

(2) Let

\[ f(x) = \begin{cases} 
 2x & \text{if } x < 0 \\
 9 - x & \text{if } 0 \leq x < 2 \\
 x^2 + 3 & \text{if } x \geq 2 
\end{cases} \]

(a) Find \(\lim_{x \to 0^-} f(x)\).

(b) Find \(\lim_{x \to 0^+} f(x)\).

(c) Find \(\lim_{x \to 2^-} f(x)\).

(d) Find \(\lim_{x \to 2^+} f(x)\).

(e) Is \(f\) continuous at 0? Explain.

(f) Is \(f\) continuous at 2? Explain.

(3) Let \(f(x) = \frac{1}{x}\).

(a) Find the equation of the tangent line to \(y = f(x)\) when \(x = 10\).

(b) Use the tangent line to \(f\) at \(x = 10\) to approximate \(\frac{1}{10.1}\).