1. [11 points]
   a. [8 points] Indicate if each of the following statements are true or false by circling the correct answer. No justification is required.
      i) If \( f(3) = 4 \) then the point \((4, 3)\) is on the graph of \( y = f^{-1}(x) \).
         \[ \text{True} \quad \text{False} \]
      ii) If a polynomial \( p(x) \) has odd degree, then the function \( p(x) \) is an odd function.
          \[ \text{True} \quad \text{False} \]
      iii) If the function \( f(x) \) is odd, then the function \( g(x) = xf(x) \) is an even function.
           \[ \text{True} \quad \text{False} \]
      iv) The function \( h(x) = 2 - (x - 4)^2 \) with domain \( x \geq 4 \) is an invertible function.
          \[ \text{True} \quad \text{False} \]

   b. [2 points] Compute the value of the following limits:
      \[
      \text{Solution:} \quad \lim_{x \to -\infty} \frac{2e^x + 1}{5 + x} = 0 \quad \lim_{x \to -3^-} \frac{-1}{x + 3} = \infty
      \]

   c. [1 point] Let \( f(x) = x^{\frac{1}{5}} \) and \( g(x) = 1 + \log(x) \). Which of the functions grows more rapidly as \( x \to \infty \)? Circle your answer.
      \[
      \text{Solution:} \quad \begin{array}{c} f(x) \quad g(x) \quad \text{It can’t be determined.} \end{array}
      \]