1. Suppose \( f(x) = \sqrt{x + 4} \), and \( g(x) = x^2 \). Find the domain and range of \( f(x) \), \( g(x) \), and \( f \circ g(x) \).

2. Find the sine, cosine, and tangent of \( \frac{5\pi}{4} \).

3. For each function, say whether it is odd, even, neither, or both. (Show your work.)
   - (a) \( f(x) = 3x - 1 \)
   - (b) \( g(x) = x^2 - x^6 \)
   - (c) \( h(x) = (x + 1)^2 - x^6 \)

4. For each of the following, determine the limit. If the limit does not exist or is infinite, write “DNE.”
   - (a) \( \lim_{x \to 5} \frac{x^2 - 6x + 5}{x - 5} \)
   - (b) \( \lim_{x \to -1} \frac{1}{1 + x} \)
   - (c) \( \lim_{x \to 4} f(x) \), where \( f(x) = \begin{cases} 2x - 1 & x \leq 4 \\ 7 & x > 4 \end{cases} \)