Find the exact area bounded by the functions \( f \) and \( g \). Include a sketch of the graphs with the region shaded. Use algebra to find any intersections of graphs.

1. \( f(x) = x^2 - 4x \) and \( g(x) = 0 \).

2. \( f(x) = 4\sin(4x) \) and \( g(x) = 0 \).

3. \( f(x) = x^2 + 2x + 1 \) and \( g(x) = x + 1 \).

4. \( f(x) = -x^2 + 4x + 2 \) and \( g(x) = x + 2 \).