1. Compute and simplify the expression the inverse of each of the following functions

   (a) \( f(x) = 9 + 2 \sqrt[3]{x} \)

   (b) \( f(x) = \frac{x - 2}{x + 7} \)

2. A radioactive substance decays exponentially. A scientist begins with 110 milligrams of this radioactive substance. After 31 hours, 55 mg of the substance remains. How many milligrams will remain after 54 hours?