1. Write the equation for the tangent line to \( f(x) = \sqrt{x} \) at the point \((9, 3)\).

2. Use the fundamental theorem of calculus to evaluate \( \int_0^1 3x^2 \, dx \).

3. The function \( f \) is shown below.

Evaluate \( \int_0^4 f(x) \, dx \).