No calculators are allowed, but you must still simplify all answers.

1. (4 points) Find the general antiderivative for each of the following functions.
   
   (a) \( f(x) = 10x^4 + 4x^3 - 15. \)

   (b) \( f(x) = 9\sqrt{x}. \)

2. (6 point) Evaluate the following indefinite integrals.

(a) $\int (5 \cos x + 2 \sin x) \, dx$

(b) $\int x^2(x^5 + 1) \, dx$

(c) $\int x^2(x^3 + 1)^9 \, dx$