

Name: _____

Collaborator(s): _____

Please take your time and answer each question clearly and carefully. You may work with other students, but please be sure to write your own version of your solutions, in your own words, on this sheet. Please note your collaborators above. Collaboration is optional, but please spend your time constructively.

1. Find the following integrals. You will need to use substitution. Don't forget the $+C$.

(a) $\int x^3 e^{x^4} dx$

(b) $\int \cot(x) dx = \int \frac{\cos(x)}{\sin(x)} dx$

2. Find the following integrals. You will need to use integration by parts. Don't forget the $+C$.

(a) $\int x \sin(x) dx$

(b) $\int x^2 e^x dx$