

Math 3280 Worksheet 0: Calculus review.

Group members (2 to 4): \_\_\_\_\_  
**Only hand in 1 sheet per group - individual papers will not be graded.**

(1) Calculate the second derivative of  $f(t) = t^2 \cos(3t)$ .

(2) Find the antiderivative of  $te^t$  by integrating by parts.

(3) Compute the integral  $\int_0^1 \frac{2}{x^2+x} dx$  by decomposing the integrand into partial fractions.