Math 3280 Worksheet 0: Calculus review.

Group members (2 to 4):

Only hand in 1 sheet per group.

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