

## Homework Set 3

DUE: SEP 25-27, 2017 (AT THE BEGINNING OF RECITATION)

1. Evaluate the following indefinite integrals:

a)  $\int (x^3 - x^2)e^x dx$

b)  $\int \cos 3z \cos 7z dz$

c)  $\int x \sin^2 x dx$

d)  $\int xe^{4x} dx$

e)  $\int \sec^3 x dx$

f)  $\int e^{-y} \sin 2y dy$

g)  $\int \cos^3 x \sin^3 x dx$

h)  $\int \sqrt{x}e^{\sqrt{x}} dx$

i)  $\int \sin^2 \theta \cos \theta d\theta$

j)  $\int \sqrt{1 - \cos 2w} dw$

k)  $\int \frac{1}{x \ln x} dx$

l)  $\int \frac{1}{x(\ln x)^2} dx$