ECET341 Homework 4

(1) Find the Laplace transform of each of the following functions:

(a) $f(t) = \sin \omega t \cdot u(t)$
(b) $f(t) = \cos \omega t \cdot u(t)$
(c) $f(t) = e^{-at}u(t)$

(2) Find the inverse Laplace transform for each of the following functions:

(a) $F(s) = \dfrac{18s^2 + 66s + 54}{(s+1)(s+2)(s+3)}$

(b) $F(s) = \dfrac{1}{s(s^2 + 8s + 15)}$

(c) $F(s) = \dfrac{10(3s^2 + 4s + 4)}{s(s+2)^2}$