University of Waterloo
MATH 213, Spring 2015
Assignment 5

Question 1

Find the inverse of the given transform.

a)
$$\frac{3s^2 - 12s^2 - 2s - 56}{(s-7)s(s^2+4)}$$

b)
$$\frac{s^4 + 3s^3 + 2s^2 + 27s + 18}{s^3(s^2+9)}$$

Question 2

Use the Laplace transform to find the particular solution.

$$y''' - 2y'' + 4y' - 8y = 0$$
$$y(0) = 0, y'(0) = 0, y''(0) = 4$$