

Name: _____

Section: _____

R·I·T SCHOOL OF MATHEMATICAL SCIENCES

Homework 7

MATH 211

1. Find the Laplace Transforms using the table and simplify your answers as much as possible.

(a) $g(t) = t \sin 2t - 2t^4$

1a. _____

(b) $g(t) = 3tu(t - 3)$

1b. _____

(c) $h(t) = \cos t \cdot u(t - \pi)$

1c. _____

(d) $m(t) = e^{-2t}u(t - 1)$

1d. _____

2. Find the inverse Laplace Transforms of the following functions.

(a) $M(s) = \frac{s}{s^2 + 5s + 6}$

2a. _____

(b) $G(s) = \frac{se^{-3s}}{s^2 + 4}$

2b. _____

(c) $F(s) = \frac{s}{(s+1)(s^2+6s+10)}$

(d) $H(s) = \frac{e^{-2s}}{s^3+5s^2+4s}$

2c. _____

2d. _____