Name _____ ID # _____ Section # _____

_____

Q1) Find the *Laplace transform* of the following functions

(a) $f(t) = te^{-3t} \sin t$

(b) $f(t) = e^{2t} * \sin t$

Q2. Find inverse Laplace transform $F(s) = \dfrac{1}{s(s^2 + 9)}$

_____

Q1) Find the *Laplace transform* of the following functions

(a) $f(t) = t\left\{\int_0^t \cos 2\tau d\tau\right\}$

(b) $f(t) = \begin{cases} 1, & 0 \le t < 2 \\ t, & t \ge 2 \end{cases}$

Q2. Find inverse Laplace transform $F(s) = \dfrac{1}{s^2(s+1)}$

Name _____   ID # _____   Section # _____

_____

Q1. Find inverse Laplace transform $F(s) = \dfrac{1}{s(s^2 + 1)}$

Q2) Find the *Laplace transform* of the following functions
(a) $f(t) = e^{2t} * t \sin t$

(b) $\begin{aligned} f(t) &= \sin t,\ 0 \le t < \pi \\ f(t) &= f(t + \pi) \end{aligned}$