

DEPARTMENT OF MATHEMATICAL SCIENCES
MATH 301 Methods of Applied Mathematics Term 061

QUIZ #4(a)

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 $F(s) = \frac{1}{s(s^2 + 9)}$

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QUIZ #4(b)

Name _____ ID # _____ Section # _____

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

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

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

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

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QUIZ #4(c)

Name _____ ID # _____ Section # _____

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

Q2) Find the *Laplace transform* of the following functions

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

(b) $f(t) = \sin t, 0 \leq t < \pi$
 $f(t) = f(t + \pi)$