
Math 221-05 Quiz 10

Name:_____

Score:_____

Instructions: You must show supporting work to receive full and partial credits. No text book, notes, formula sheets allowed.

1(3pts) Use definition to find the Laplace transform of the function $f(t) = \begin{cases} e^{5t}, & 0 \leq t \leq 3 \\ 0, & t \geq 3 \end{cases}$

2(3pts) Find the Laplace transform of the function $f(t) = (2 + t)^2$.

3(4pts) Find the inverse Laplace transform of the function

(a) $F(s) = \frac{5}{(s+2)^3}$.

$$F(s) = \frac{4}{s^2 - 4s + 8}.$$