MATH 3306
Quiz 6.2

Use Laplace Transforms to solve the given initial value problems. Table 6.2.1 on page 321 may be used. You may use the Apart command in Mathematica, or other technology to help with the Partial Fraction Decomposition.

(1)
$$y'' + 2y' + y = 4e^{-t}, \quad y(0) = 2, \quad y'(0) = -1$$

(2)
$$y'' + 2y' - 8y = 3t - \sin(2t), \quad y(0) = 2, \quad y'(0) = -1$$