MTH 3311 - Test #3 - Version #3 $_{\rm SPRING~2017}$

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Show CLEARLY how you arrive at your answers.

1. Find the general solution of the equation:

$$y'' + 3y' + 2y = 10e^{3x}$$

2. Find the general solution of the equation:

$$y'' - 2y' + y = -2\cos(3x) - 36\sin(3x)$$

3. Find the general solution of the equation:

$$y'' - 12y' + 36y = e^{6x} \ln(x)$$

(Assume that x > 0)