Sp2016 Practice Exam 3:
Name_____

Show polynomials etc. you enter in calculators and explain what you did.
No imaginary numbers in final answers.
Read the instructions. I am frequently trying to save you time.
Use the back of a page to show more work if you need to.
4 questions - 25 points each.

1. Solve $y'' + 4y' + 4y = 48e^{2t}$ with $y[0] = 4,\ y'[0] = 8$

2. Solve $y'' + 2\,y' + 5\,y = 50\,t + 17\sin(2\,t)$

Q1	Q2	Q3	Q4	Total

3. Solve $y''' + 3y'' + 3y' + y = 6e^{-t}$

Score / 25

4.

4.1. Show that $y_1 = t^{-2}$ is a solution of $t^2 y'' + 5 t y' + 4 y = 0$.

4.2. Solve $t^2 y'' + 5 t y' + 4 y = 50 t^3$.
Make sure you write down equations you are solving and explain your process and steps.

Score / 25