EGR 345 Learning Activity 5

LA 5 - Part 1

Find the step response for the transfer function

$$G(s) = \frac{1}{(s+3)^2}$$

- find the step response by hand and wth Python
- overlay the two graphs to verify your answer.

LA 5 - Part 2

Find the step response for an underdamped, second-order system:

$$G(s) = \frac{\omega_n^2}{s^2 + 2\zeta\omega_n s + \omega_n^2}$$

- assume the system is underdamped: $0 < \zeta < 1$
- find a symbolic expression for the step response "by hand"
- note that the numerator is not 1