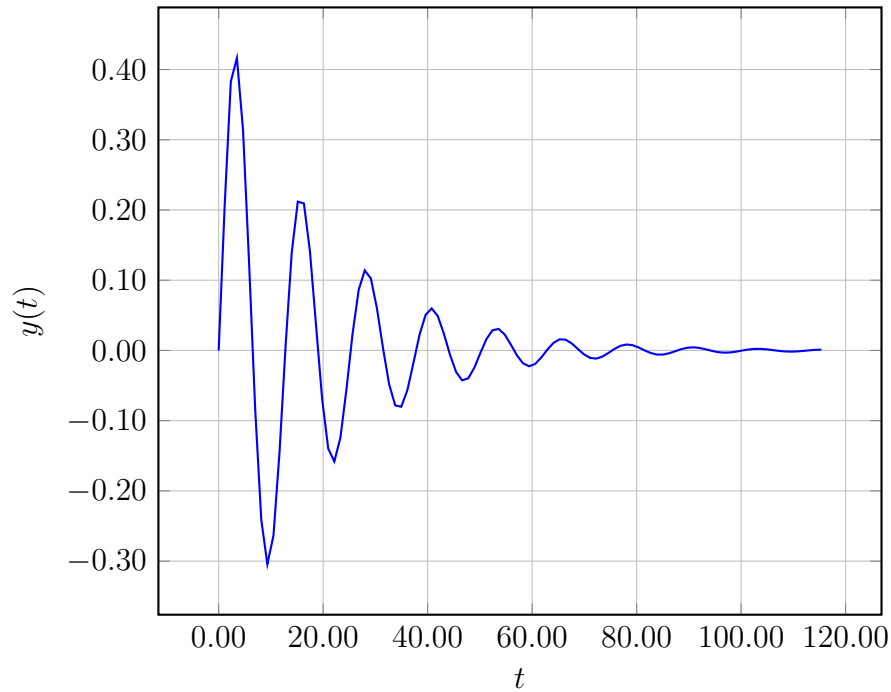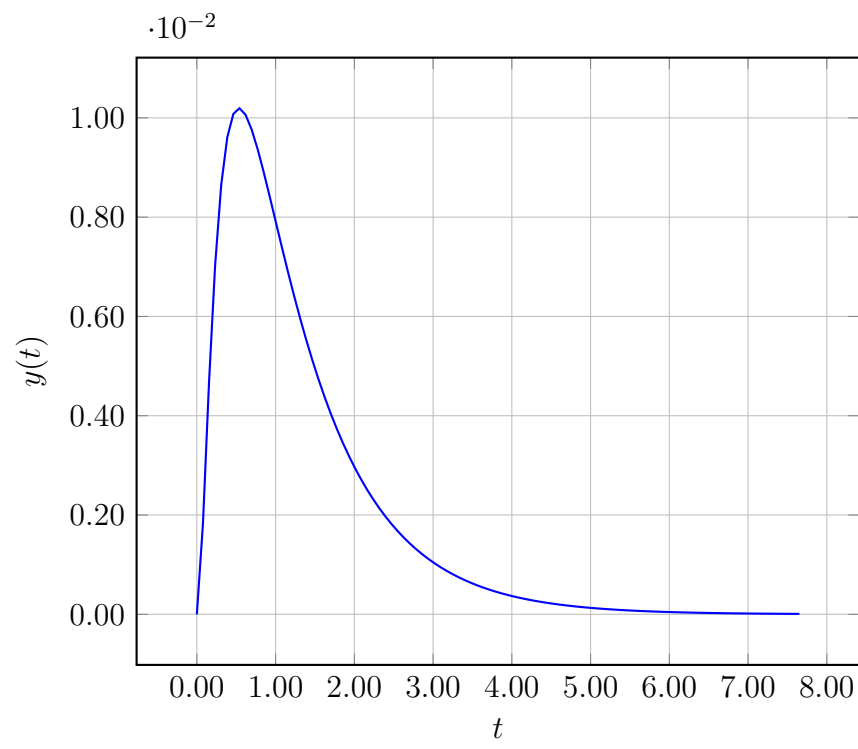1. (50 points) An open-loop transfer function is given as,

$$G(s) = \frac{1}{s^3 + 2.0s^2 + 3.00504s + 7.00504}$$

which of the following PI-controllers stabilizes the system in a closed-loop unit feedback structure?

    A. $F(s) = -9.97981 + \frac{1.01009}{s}$

    B. $F(s) = -2.51009 + \frac{0.50504}{s}$

    C. $F(s) = 0.53029 + \frac{1.01009}{s}$

    D. $F(s) = -9.96971 + \frac{2.51009}{s}$

    E. $F(s) = 0.52019 + \frac{2.51009}{s}$

2. (50 points) Which of the following does not overshoot?



A.

B.