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

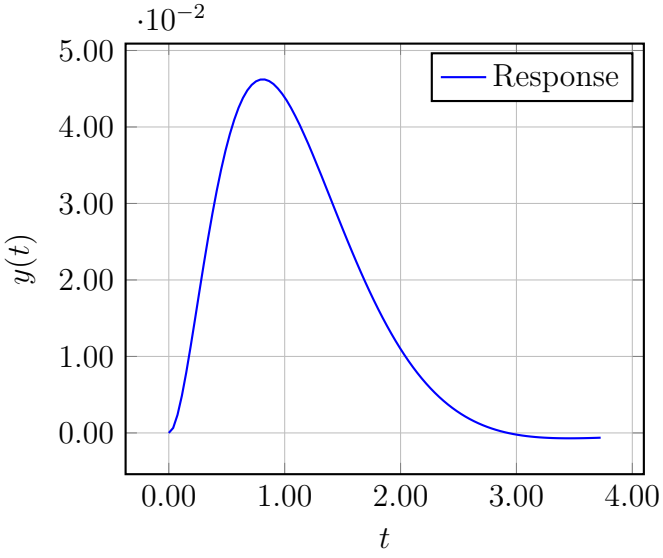
$$G(s) = \frac{1}{s^3 + 2.0s^2 + 3.49495s + 7.49495}$$

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

A. $F(s) = 2.4798 + \frac{3.4899}{s}$
B. $F(s) = -3.4899 + \frac{0.99495}{s}$
C. $F(s) = -7.0303 + \frac{3.4899}{s}$
D. $F(s) = -8.0202 + \frac{1.9899}{s}$
E. $F(s) = 3.4697 + \frac{1.9899}{s}$

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

A.



B.