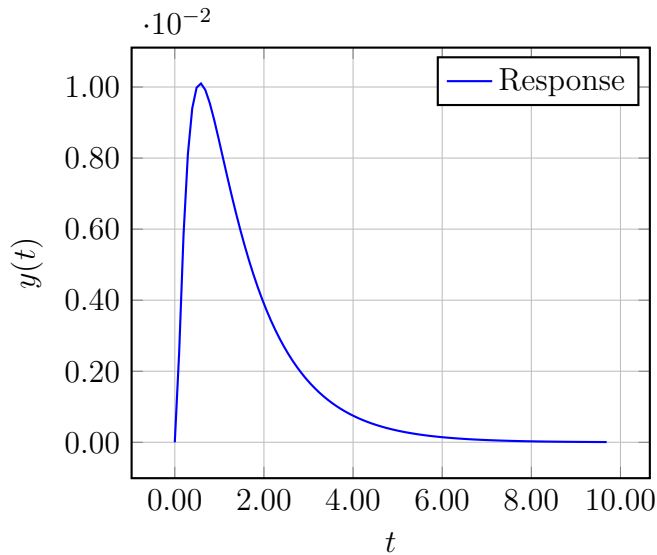1. (50 points) An open-loop transfer function is given as,

$$G(s) = \frac{1}{s^3 + 2.0s^2 + 3.05554s + 7.05554}$$
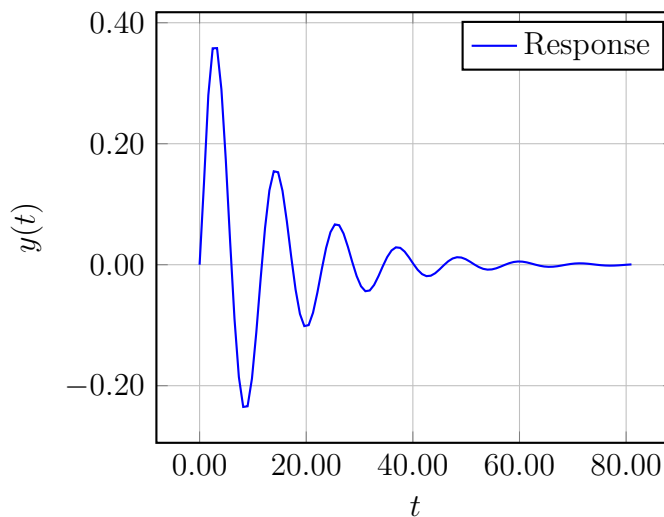
which of the following PI-controllers stabilizes the system in a closed-loop unit feedback structure?

   A. $F(s) = -9.77779 + \frac{1.1111}{s}$

   B. $F(s) = -2.6111 + \frac{0.55554}{s}$

   C. $F(s) = 0.83333 + \frac{1.1111}{s}$

   D. $F(s) = 0.72221 + \frac{2.6111}{s}$

   E. $F(s) = -9.66667 + \frac{2.6111}{s}$

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

A.

B.