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

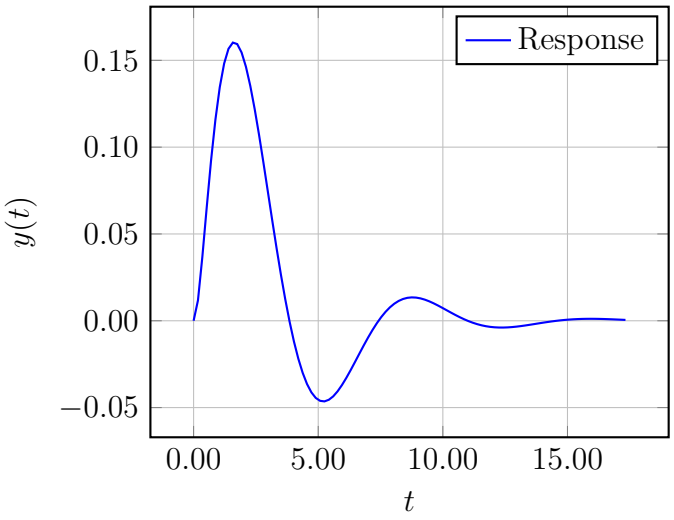
$$G(s) = \frac{1}{s^3 + 2.0s^2 + 3.44444s + 7.44444}$$

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

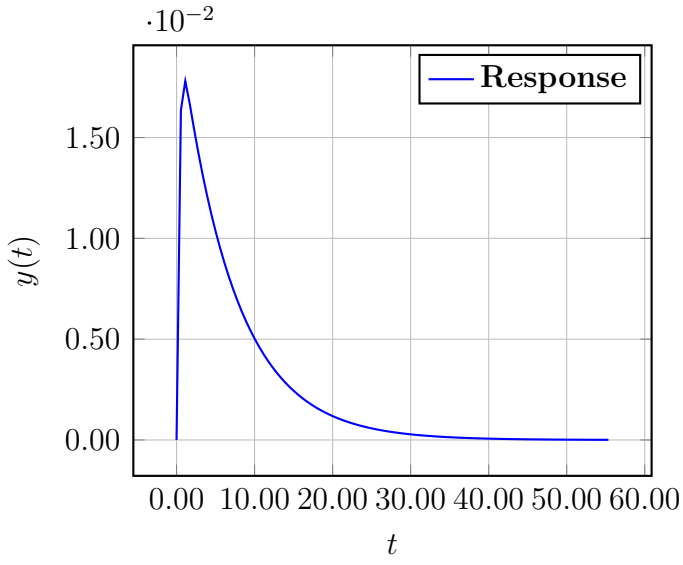
A. $F(s) = 2.27777 + \frac{3.38889}{s}$
B. $F(s) = 3.16666 + \frac{1.88889}{s}$
C. $F(s) = -7.33334 + \frac{3.38889}{s}$
D. $F(s) = -8.22223 + \frac{1.88889}{s}$
E. $F(s) = -3.38889 + \frac{0.94444}{s}$

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

A.



B.



Q	A
1	E
2	B