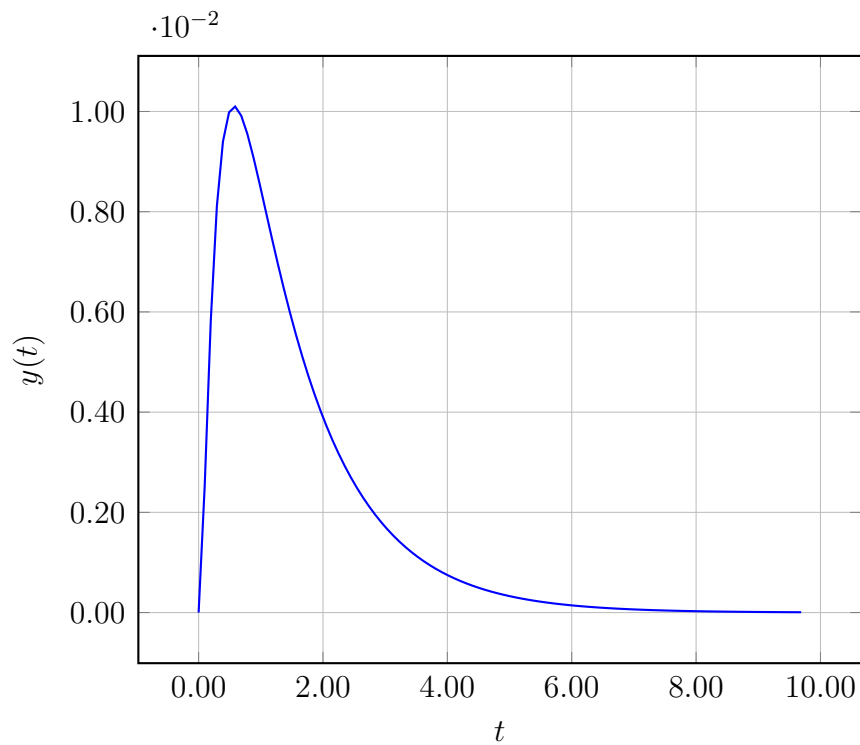


1. (50 points) An open-loop transfer function is given as,

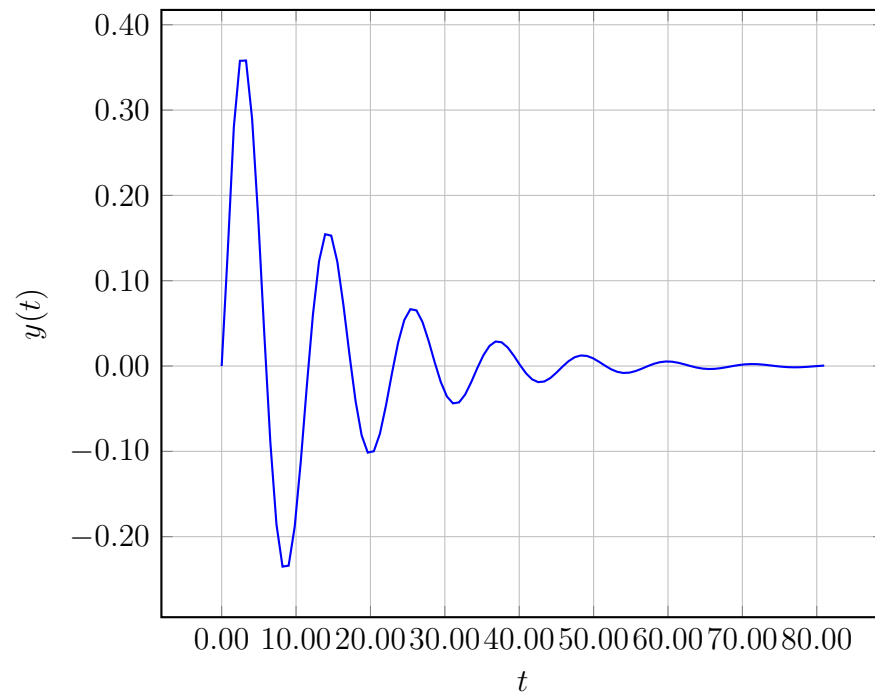
$$G(s) = \frac{1}{s^3 + 2.0s^2 + 3.05554s + 7.05554}$$

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.

Q	A
1	B
2	A