EENG307: Intro to Feedback Control
Fall 2020
Homework Assignment #9
Quiz #1

Quiz Question Friday: Find the steady-state output $y_{ss}(t)$ of the transfer function $G(s) = \frac{Y(s)}{R(s)} = \frac{1}{s+1}$ to the input $r(t) = 4\cos(\sqrt{3}t + 30°)$, $t \geq 0$. Note, $\sqrt{3} \approx 1.7$

(a) $y(t) = \frac{1}{2}\cos(3t - 30°)$

(b) $y(t) = \frac{1}{2}\cos(\sqrt{3}t - 60°)$

(c) $y(t) = \frac{1}{2}\cos(3t + 30°)$

(d) $y(t) = 2\cos(\sqrt{3}t - 30°)$

(e) $y(t) = 2\cos(3t + 30°)$