ramp disturbance: $D(s) = \frac{1}{s^2}$

$$Y(s) = \frac{(s+1)(s+2)s}{s^3 + 7s^2 + (10+k)s + k} \cdot \frac{1}{s^2}$$

$$sY(s) = \frac{(s+1)(s+2)}{s^3 + 7s^2 + (10+k)s + k} \cdot \frac{s}{s}$$

$$\lim_{t \to \infty} y(t) = \lim_{s \to 0} Y(s) = \frac{2}{k}$$

since k has no upper limit, $\lim_{t \to \infty} y(t) \to 0$