Tutorial 7

② $\dfrac{Y(s)}{X(s)} = \dfrac{G(s)}{1 + G(s)H(s)} = F(s)$

$G(s) = \dfrac{K}{s(s+8)}$ & $H(s) = 1$

$F(s) = \dfrac{\dfrac{K}{s(s+8)}}{1 + \dfrac{K}{s(s+8)}} = \dfrac{\dfrac{K}{s(s+8)}}{\dfrac{s(s+8) + K}{s(s+8)}} = \dfrac{K}{s^2 + 8s + K}$

a) $K = 7$

$F(s) = \dfrac{7}{s^2 + 8s + 7}$

b) $K = 16$

$F(s) = \dfrac{16}{s^2 + 8s + 16}$

c) $K = 80$

$F(s) = \dfrac{80}{s^2 + 8s + 80}$