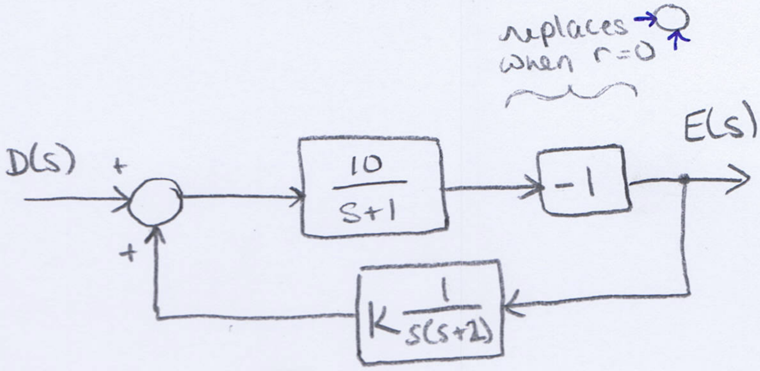
5(b) The problem is asking for the effect of the disturbance d on the error e, so we set $r=0$. Then, we can either take y as the output & compute $e = r - y = 0 - y = -y$ (two steps) or take e as the output. I'll show the latter for an illustration of how the block diagram can be re-drawn w/o changing any relationships:



$$\frac{E(s)}{D(s)} = \frac{-\frac{10}{s+1}}{1 + \left(\frac{10}{s+1}\right)\left(\frac{K}{s(s+2)}\right)}$$

$$= \frac{-10s(s+2)}{s^3 + 2s^2 + 2s + 10K}$$

since $D(s) = \frac{1}{s^2}$

$$E(s) = \frac{-10(s+2)}{s(s^3 + 2s^2 + 2s + 10K)}$$

E(s) satisfies the stability test for the FVT, so

$$e_{ss} = \lim_{t\to\infty} e(t) = \lim_{s\to 0} sE(s)$$

$$e_{ss} = \lim_{s\to 0} \frac{-10(s+2)}{s^3 + 2s^2 + 2s + 10K} = \frac{-20}{10K} = -\frac{2}{K}$$

if $K = \frac{3}{5}$, $e_{ss} = -\frac{10}{3}$

(won't get exactly there since $K < \frac{3}{5}$)