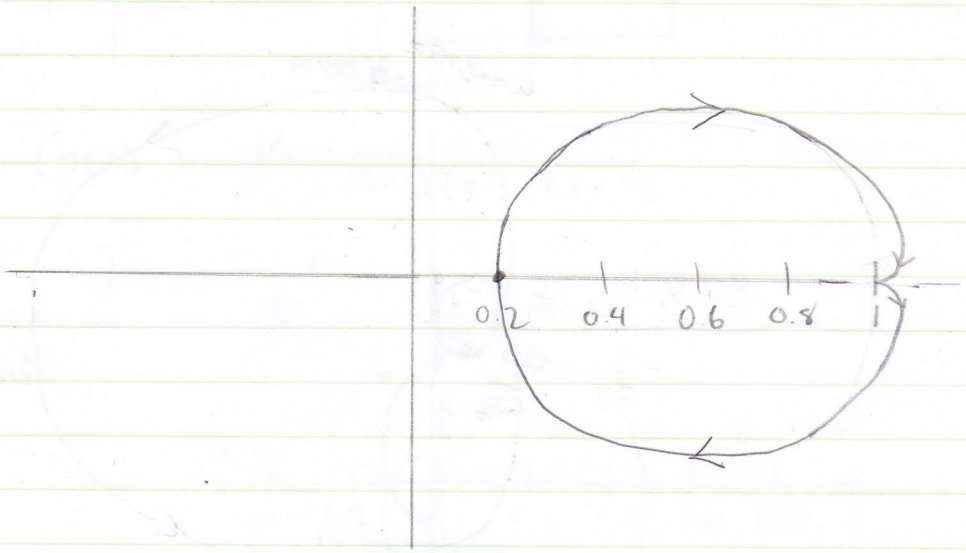
6.19 a $KG(s) = K\frac{s+2}{s+10}$



$G(j\omega) = \frac{j\omega+2}{j\omega+10}$ $\quad G(j0) = \frac{2}{10}$

$$\lim_{r\to\infty} \frac{re^{j\theta}+2}{re^{j\theta}+10} = \frac{\cancel{r}e^{j\theta}}{\cancel{r}e^{j\theta}} = 1\cdot e^{j(\theta-\theta)} = 1\cdot e^{j0}$$

for $\frac{\pi}{2} > \theta > \frac{-\pi}{2}$ $\quad G(re^{j\theta}) = 1\cdot e^{j0}$