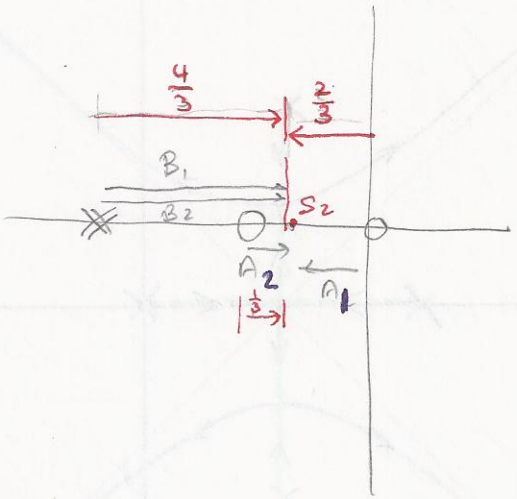

$$\frac{A_1 A_2}{B_1 B_2} = \frac{1}{|K|} \rightarrow$$

$$|K| = \frac{B_1 B_2}{A_1 A_2} \rightarrow |K| = \frac{\frac{4}{3}\cdot\frac{4}{3}}{\frac{2}{3}\cdot\frac{1}{2}} = \frac{16}{2} = 8$$

$$\therefore |3| > \delta$$

$$1 + GH = 1 + \frac{K s(s+1)}{(s+2)^2} = s^2 + 4s + 4 + Ks^2 + Ks = 0$$

$$(K+1)s^2 + (K+4)s + 4 = 0$$

$$9s^2 + 12s + 4 = 0$$

$$s_{1,2} = \frac{-12 \pm \sqrt{144 - 4\cdot 9 \cdot 4}}{18} = -\frac{2}{3}$$