$R(s)$ →(+)→[G_1]→(+/−)→[G_2]→ $Y(s)$

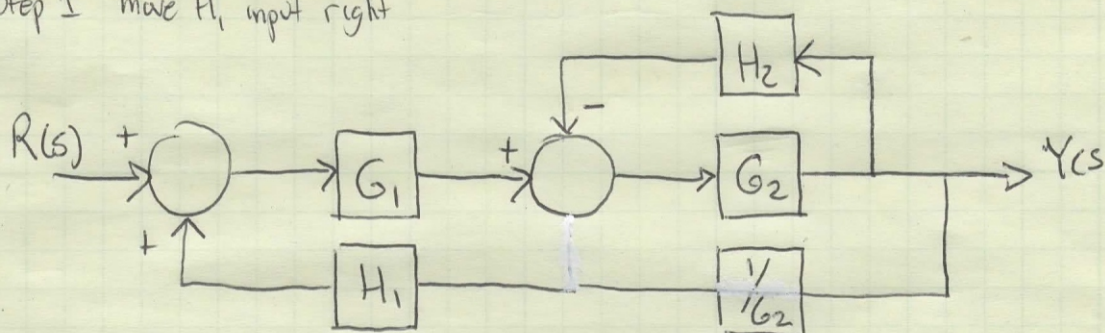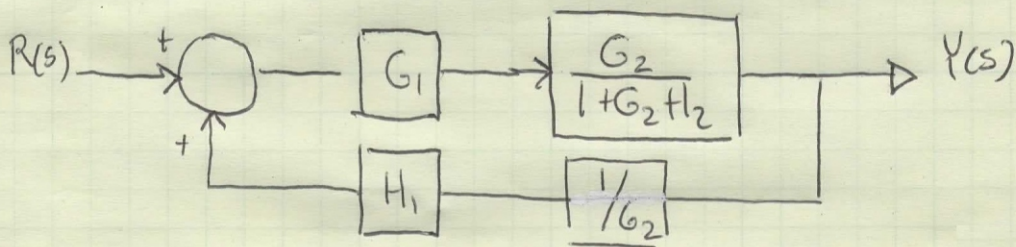with feedback blocks H_2 and H_1

Step 1   move H_1 input right

Collapse feedback loop

Combine upper pair
Collapse w/ feedback loop

$$R(s) \frac{\dfrac{G_1 G_2}{1 + G_2 H_2}}{1 - \dfrac{G_1 G_2 H_1 \tfrac{1}{G_2}}{1 + G_2 H_2}} = Y(s)$$

$$\frac{Y(s)}{R(s)} = \frac{G_1 G_2}{1 + G_2 H_2 - G_1 H_1}$$