

BJT Amplifier Multistage Amp (H.14)

20170612

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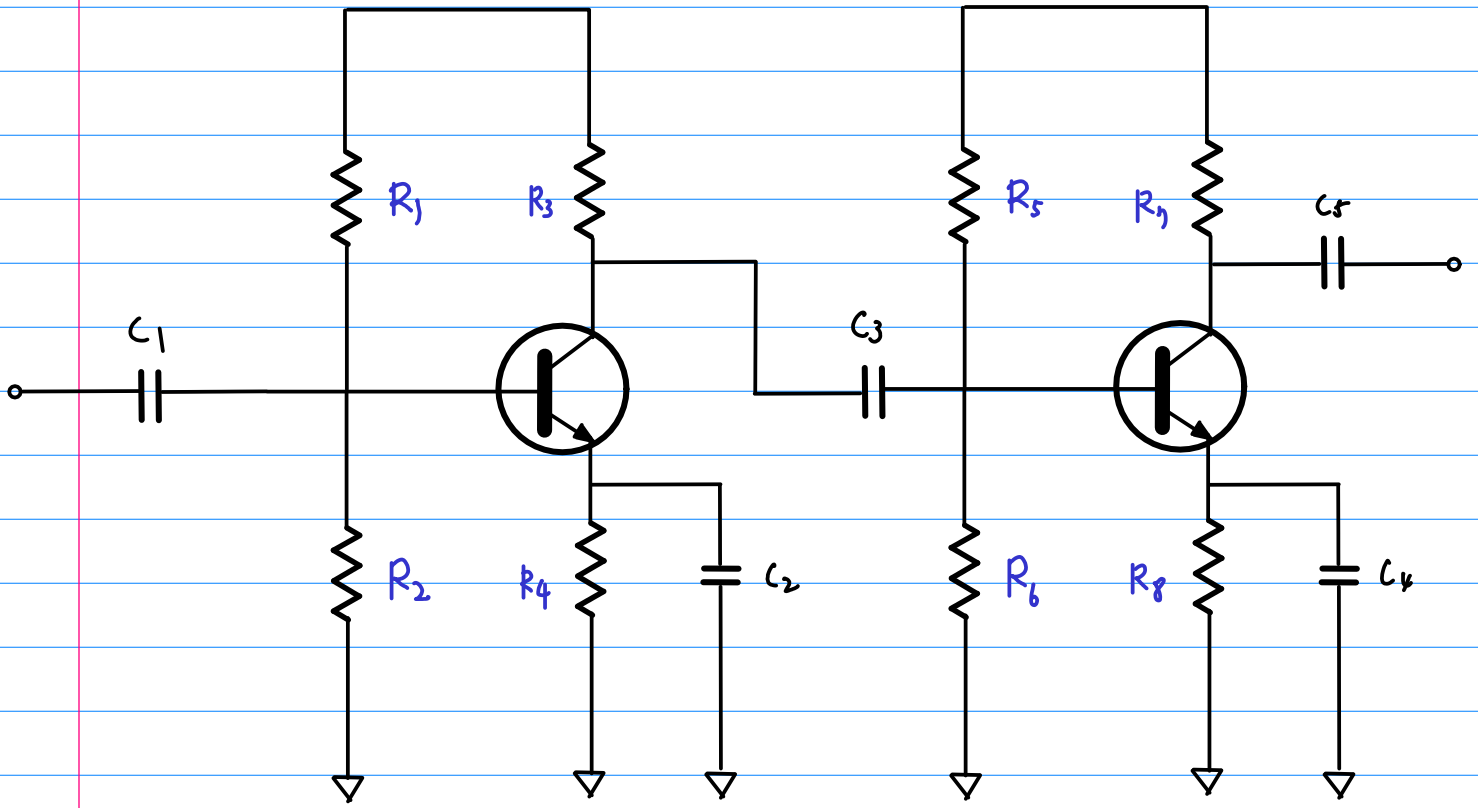
References

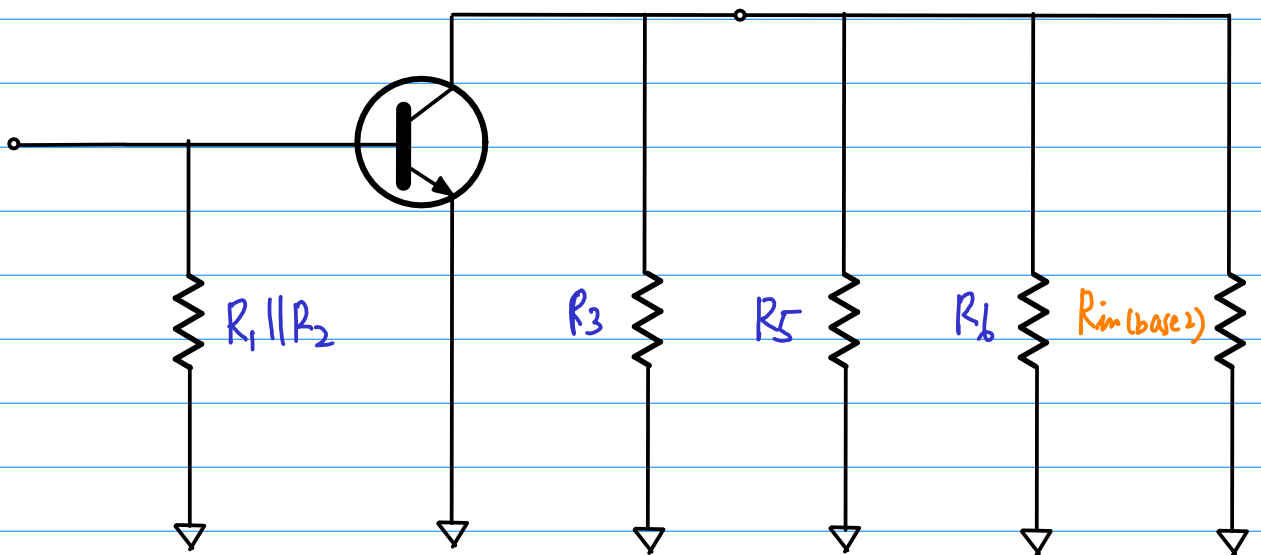
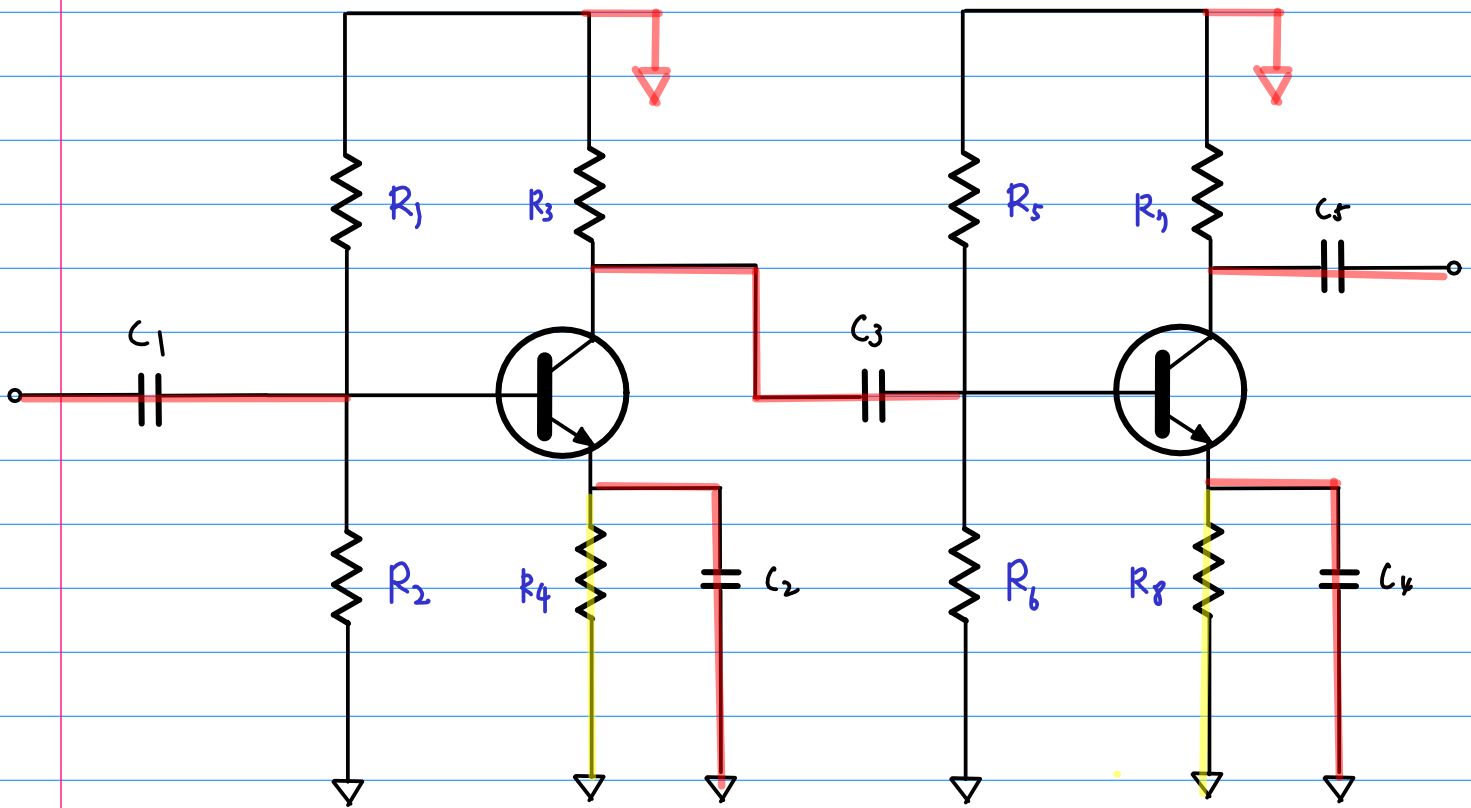
Based

[1] Floyd, Electronic Devices 7th ed

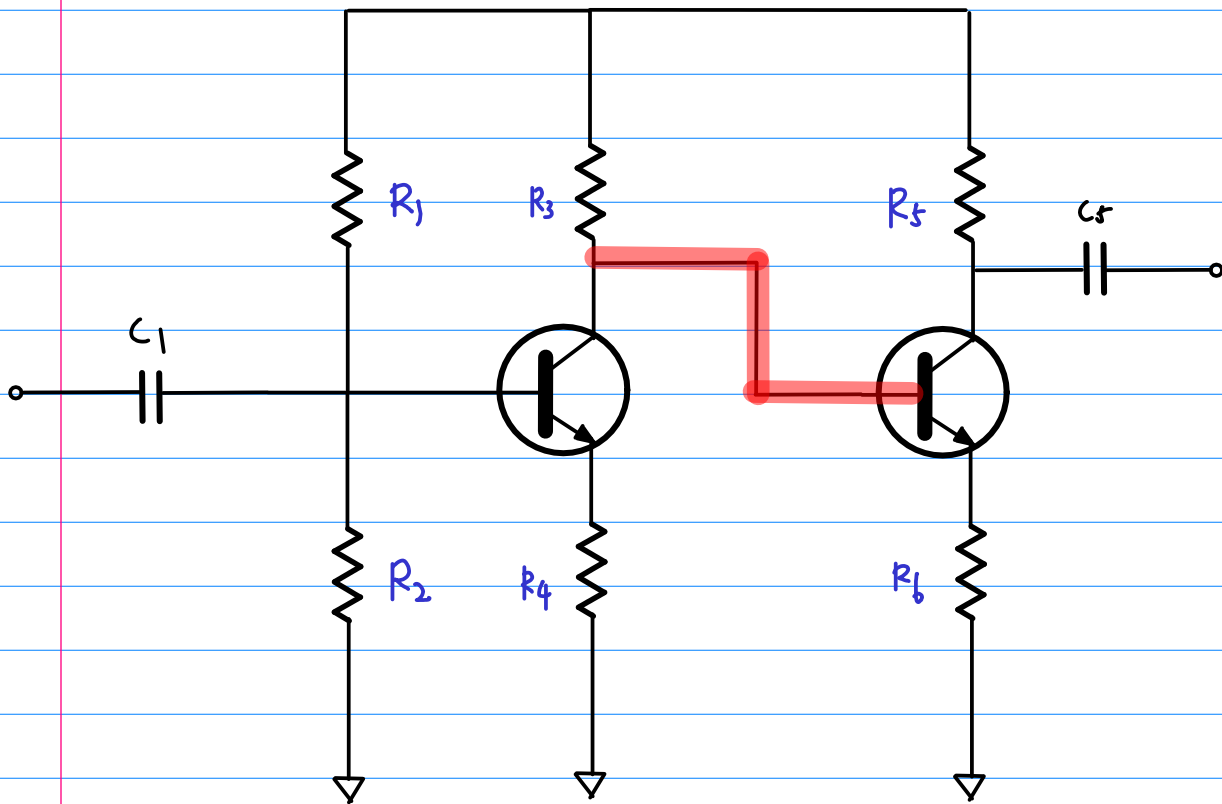
[2] Cook,

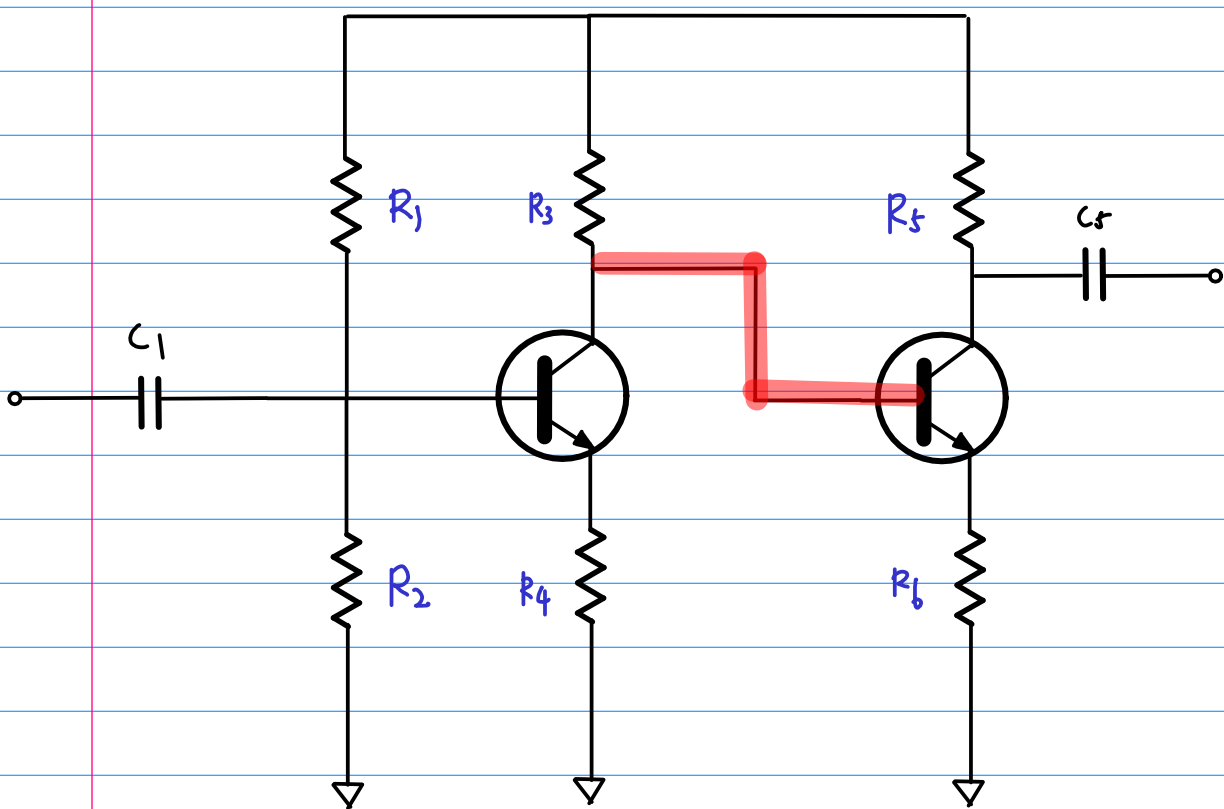
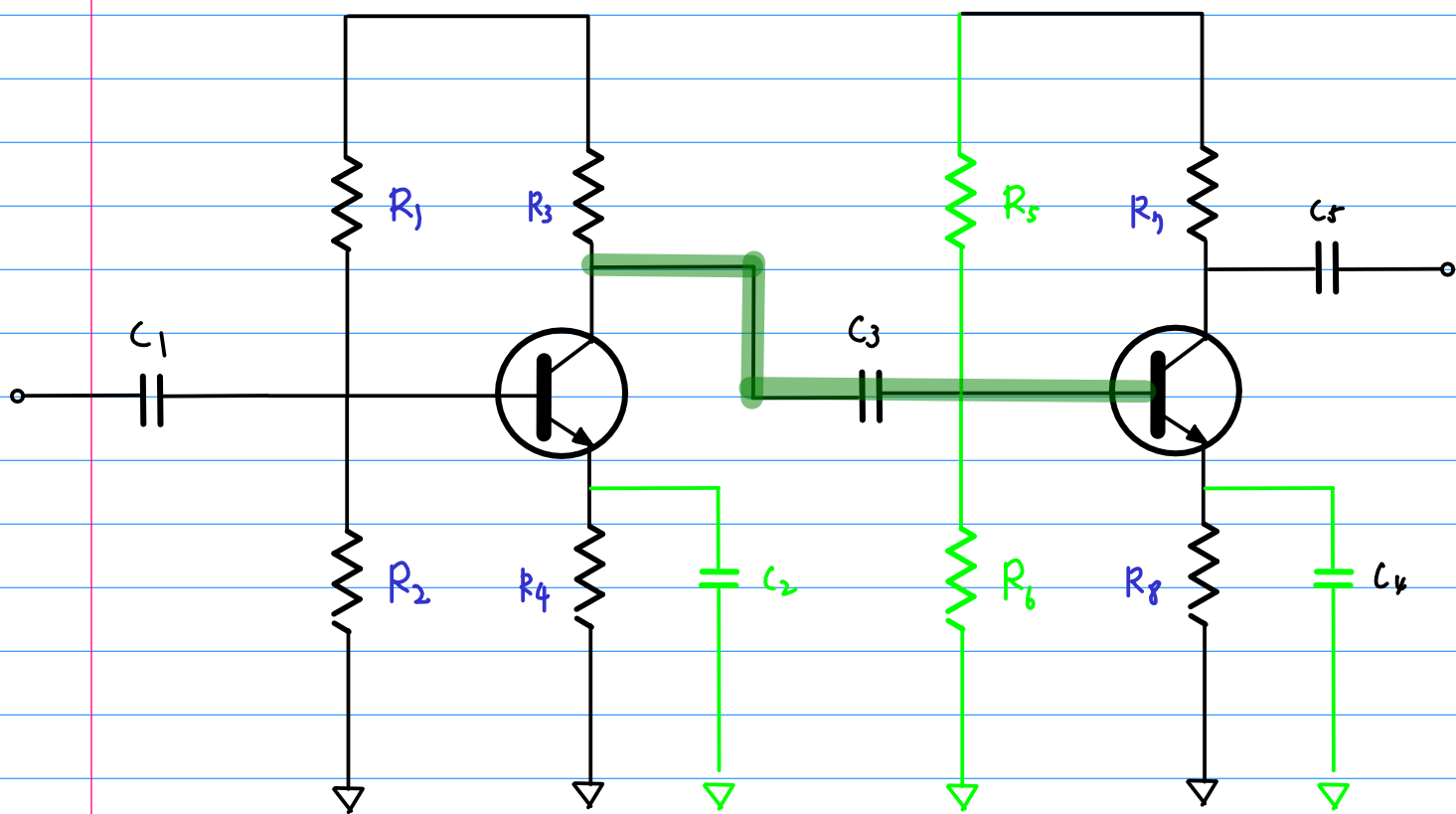
[2] en.wikipedia.org

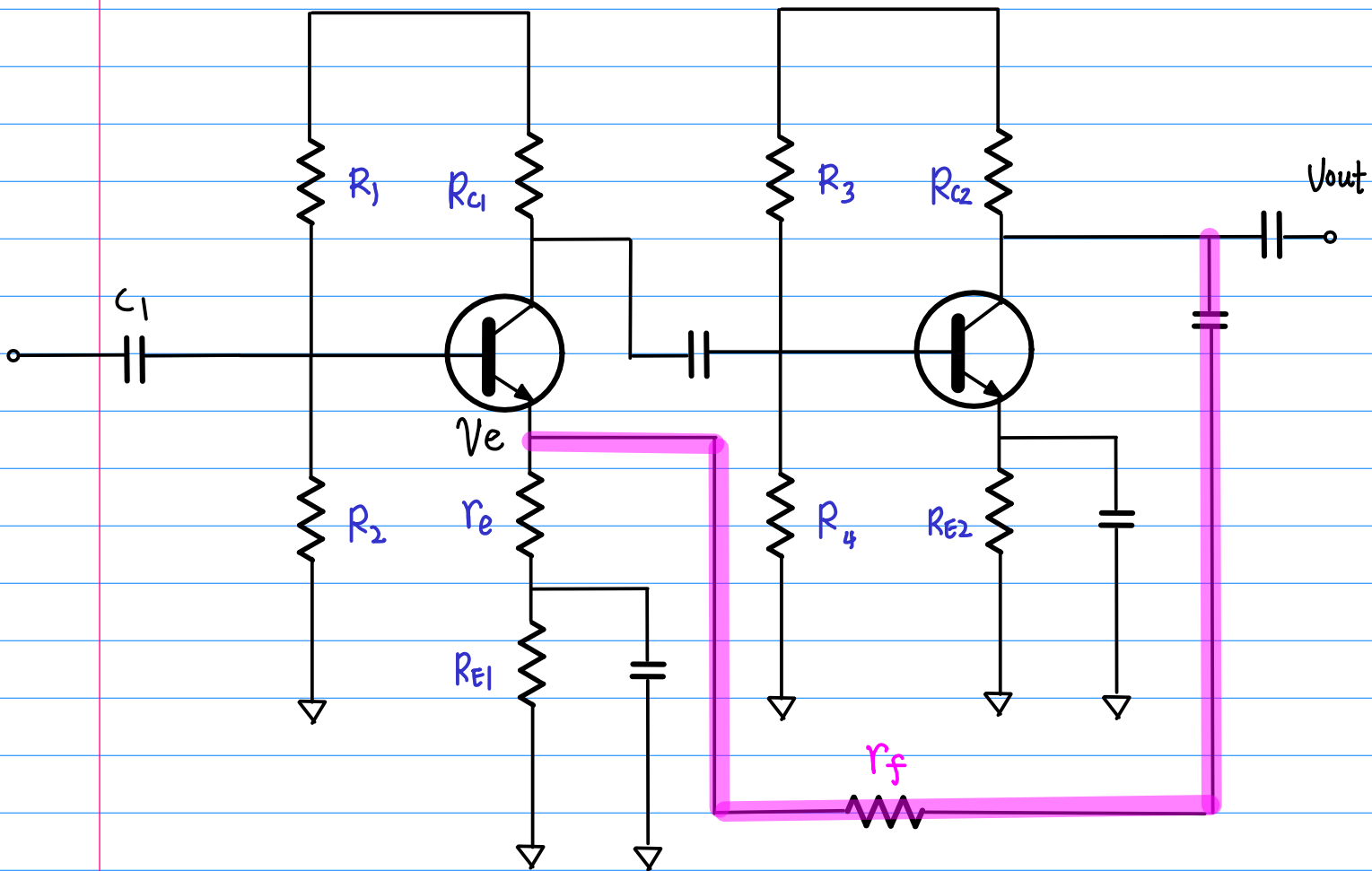




Direct Coupled Amp







unbypassed resistor r_e

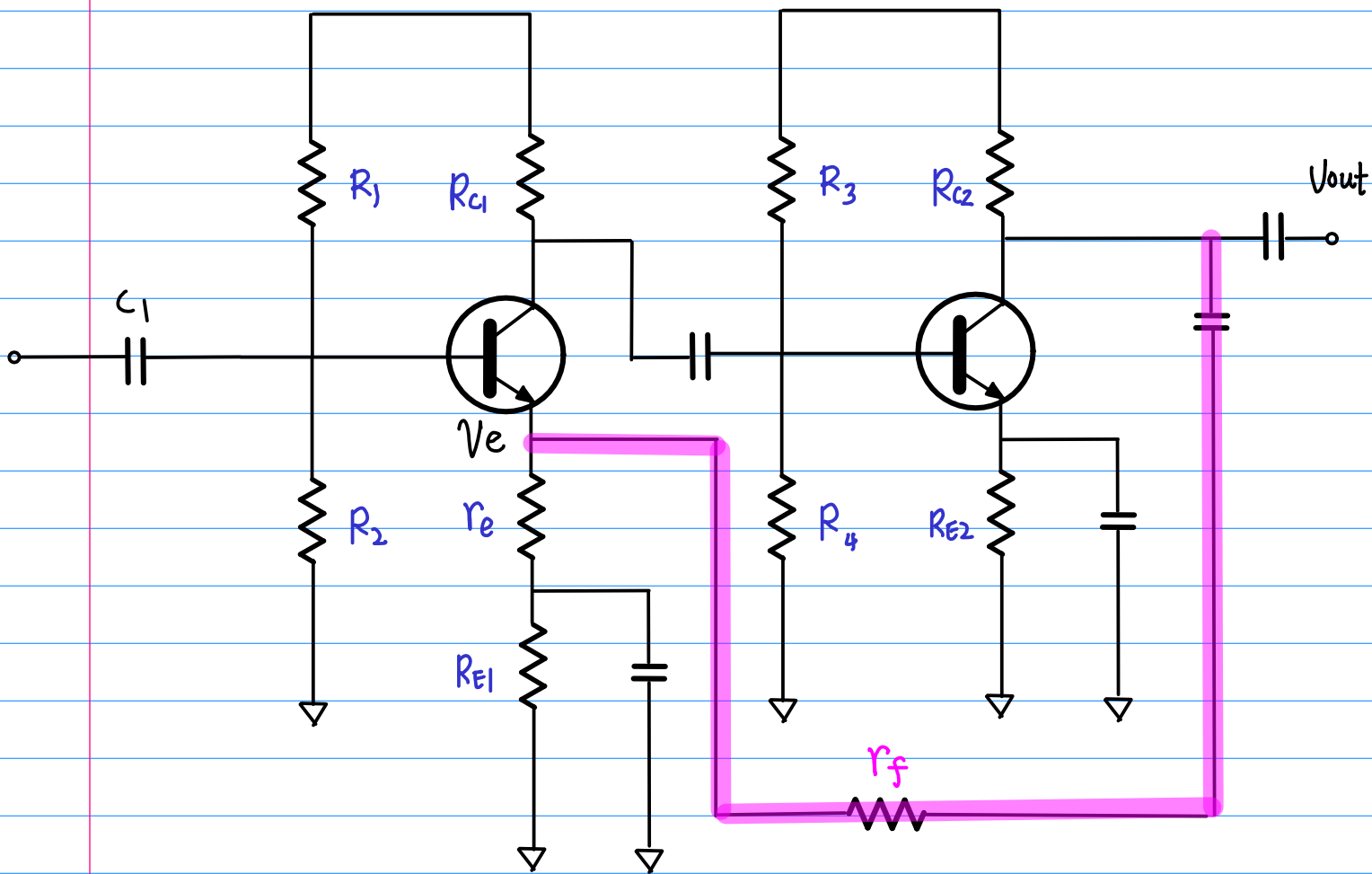
1st stage \rightarrow pre-amp

pick up the input signal
w/o loading down the source

emitter ac ground
to produce the max gain

output is fed back to
the 1st emitter
through feedback resistor r_f

$$V_e = \frac{r_e}{r_f + r_e} V_{out}$$



$$V_e = \frac{r_e}{r_f + r_e} V_{out}$$

Temp $\uparrow \rightarrow V_{out} \uparrow \rightarrow V_e \uparrow \rightarrow V_{be} \downarrow \rightarrow V_{c1} \downarrow$

$V_{c1} \downarrow \rightarrow V_{out} \downarrow$

amplified change opposes the original change

