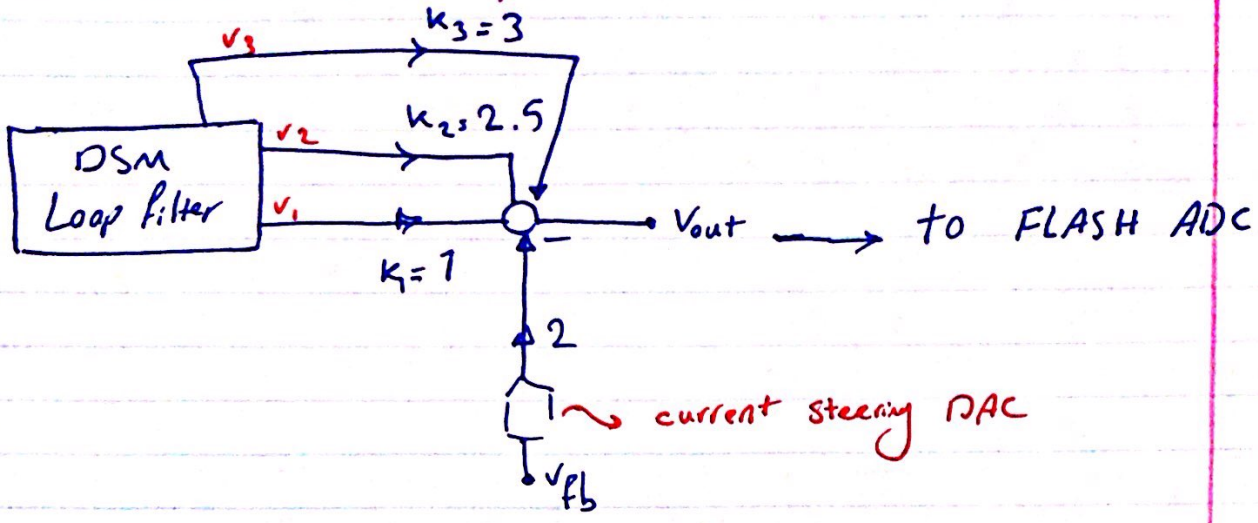

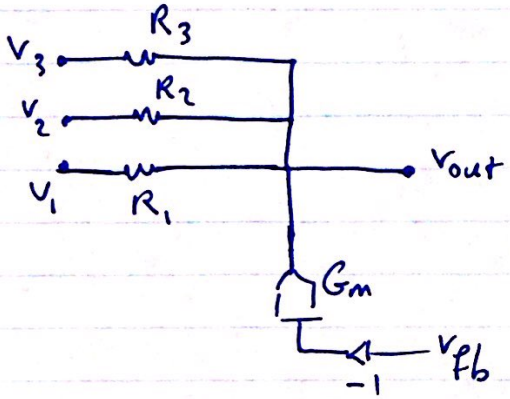

$$\frac{V_o}{V_1} = \frac{R_2 \| R_3}{(R_2 \| R_3) + R_1} = \frac{R_2 R_3}{R_1 R_2 + R_2 R_3 + R_3 R_1} = k_1 = 1 \qquad (1)$$

$$\frac{V_o}{V_2} = \frac{R_1 R_3}{R_1 R_2 + R_2 R_3 + R_3 R_1} = k_2 = 2.5 \qquad (2)$$

$$\frac{V_o}{V_3} = \frac{R_1 R_2}{R_1 R_2 + R_2 R_3 + R_3 R_1} = k_3 = 3 \qquad (3)$$

$$\frac{V_o}{-V_{fb}} = G_m \left(\frac{R_1 R_2 R_3}{R_1 R_2 + R_2 R_3 + R_3 R_1} \right) = 2 \qquad (4)$$

from (1) & (2) $\frac{R_1}{R_2} = 2.5$

from (1) & (3) $\frac{R_1}{R_3} = 3$

$\Rightarrow R_1 = 2.5\, R_2$

$R_1 = 3\, R_3$

if $R_1 = 15\ k\Omega \Rightarrow \begin{cases} R_2 = 6\ k\Omega \\ R_3 = 5\ k\Omega \end{cases}$

So,

R_1	R_2	R_3
$15\ k\Omega$	$6\ k\Omega$	$5\ k\Omega$

from (4) $G_m \left(\frac{15 \times 6 \times 5}{90 + 30 + 75} \right) = 2$

$G_m = 0.8666\ mS$

if we plug in $R_1 R_2 R_3$ to (1) (or) (2) (or) (3)

for example (1) $\Rightarrow \dfrac{R_2 R_3}{R_1 R_2 + R_2 R_3 + R_3 R_1} = \dfrac{30}{195} = 0.1538$ (5)

for example (2) $\Rightarrow \dfrac{R_1 R_3}{R_1 R_2 + R_2 R_3 + R_3 R_1} = \dfrac{75}{195} = 0.3846$ (6)

and (3) $\Rightarrow \dfrac{R_1 R_2}{R_1 R_2 + R_2 R_3 + R_3 R_1} = \dfrac{90}{195} = 0.4615$ (7)

if (5)/(6)/(7) $\times$ 6.5 $\Longrightarrow$ correct coefficients