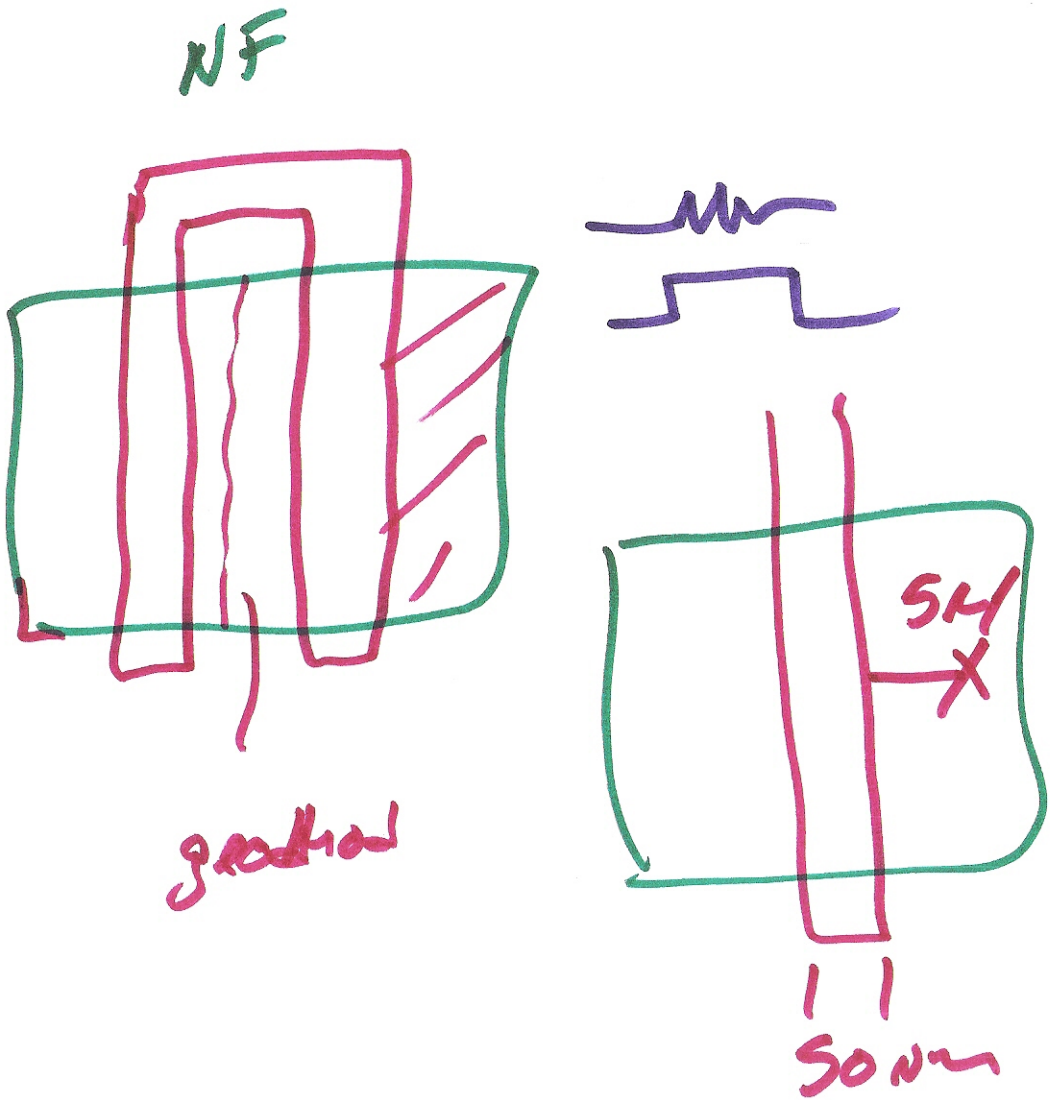
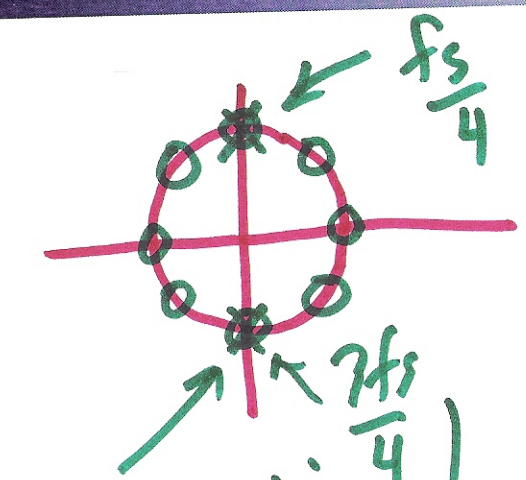
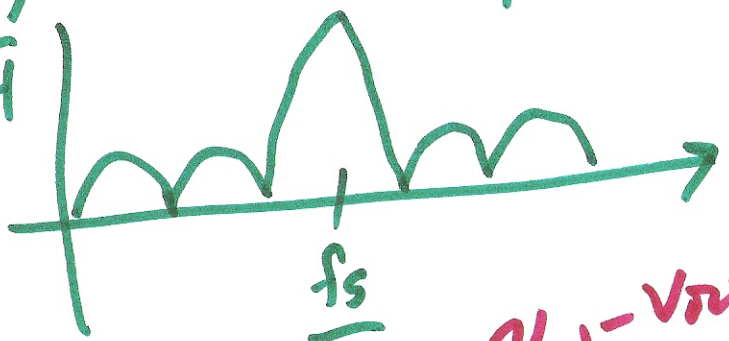


$\left\{ \frac{1}{\frac{S}{W} \cdot R_{SH}} = 200 \right.$

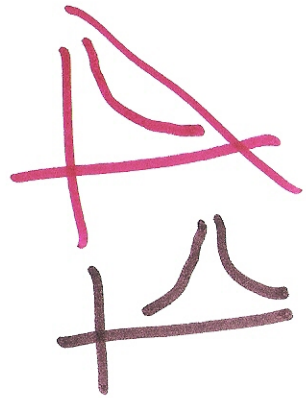


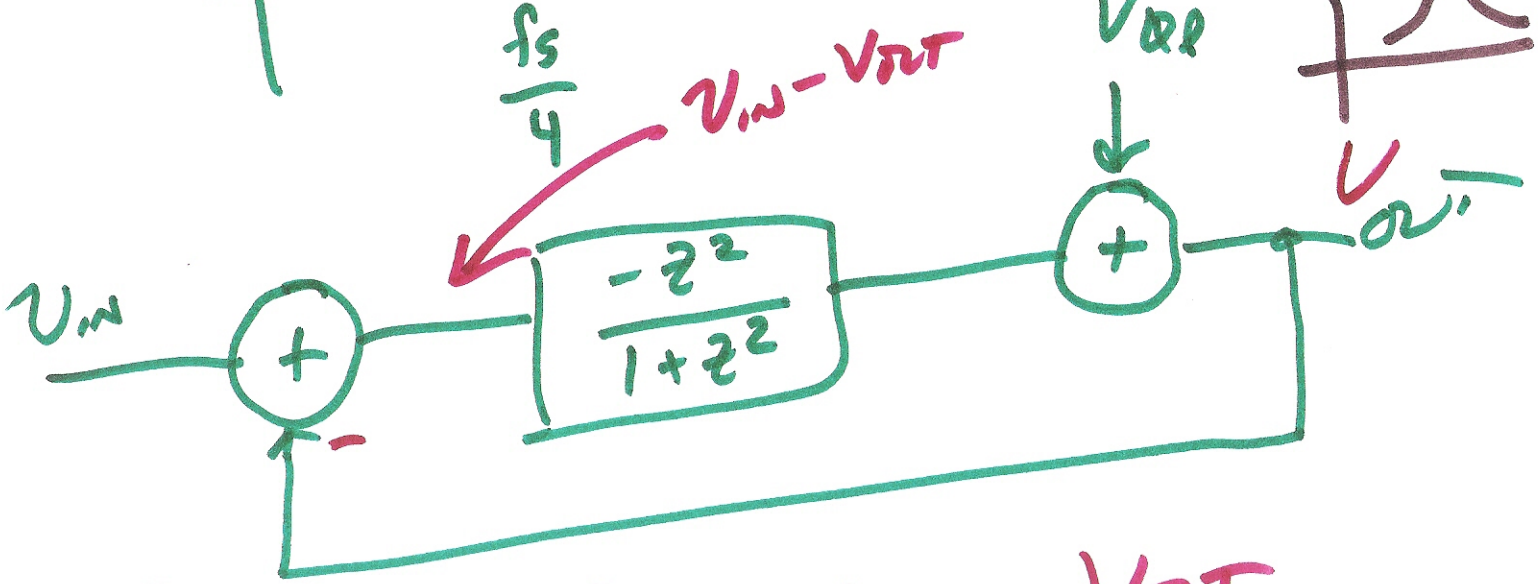
BAND pass

$$\frac{1 - z^{-8}}{1 + z^{-2}}$$



$$\frac{z^{-1}}{1 - z^{-1}}$$



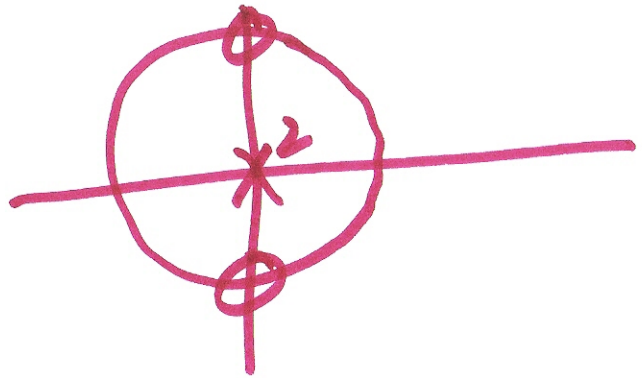


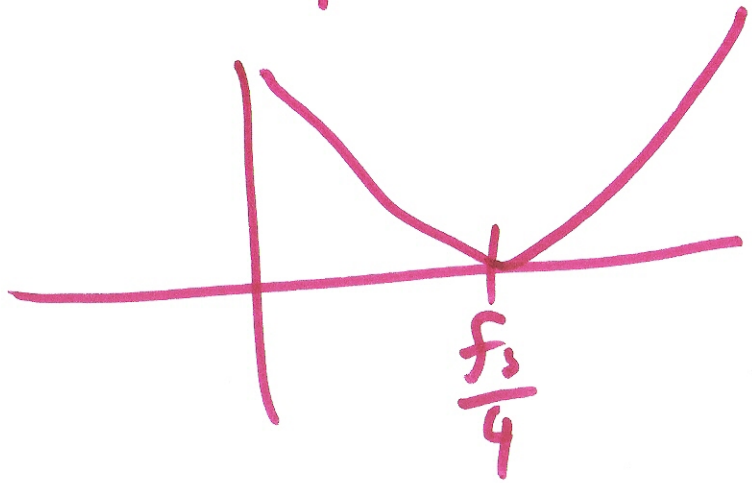
$$\frac{-z^2}{1+z^2}(V_{in} - V_{out}) + V_{dd} = V_{out}$$

2)

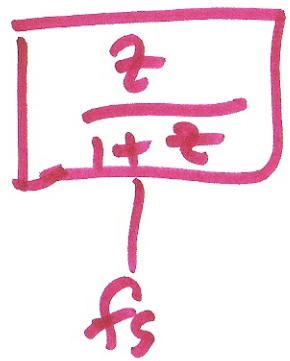
$$-\bar{z}^2 V_{IN} + \bar{z}^2 V_{OUT} + V_{dd}(1+\bar{z}^{-2}) = (1+\bar{z}^2) V_{OUT}$$

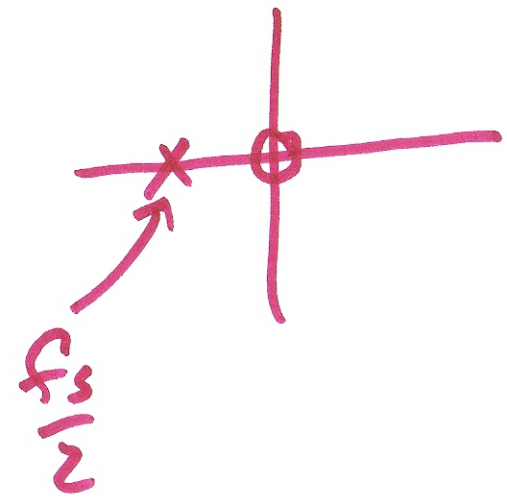
$$V_{OUT} = -\bar{z}^2 V_{IN} + V_{dd}(1+z^{-2}) \quad \frac{z^2+1}{z^2}$$

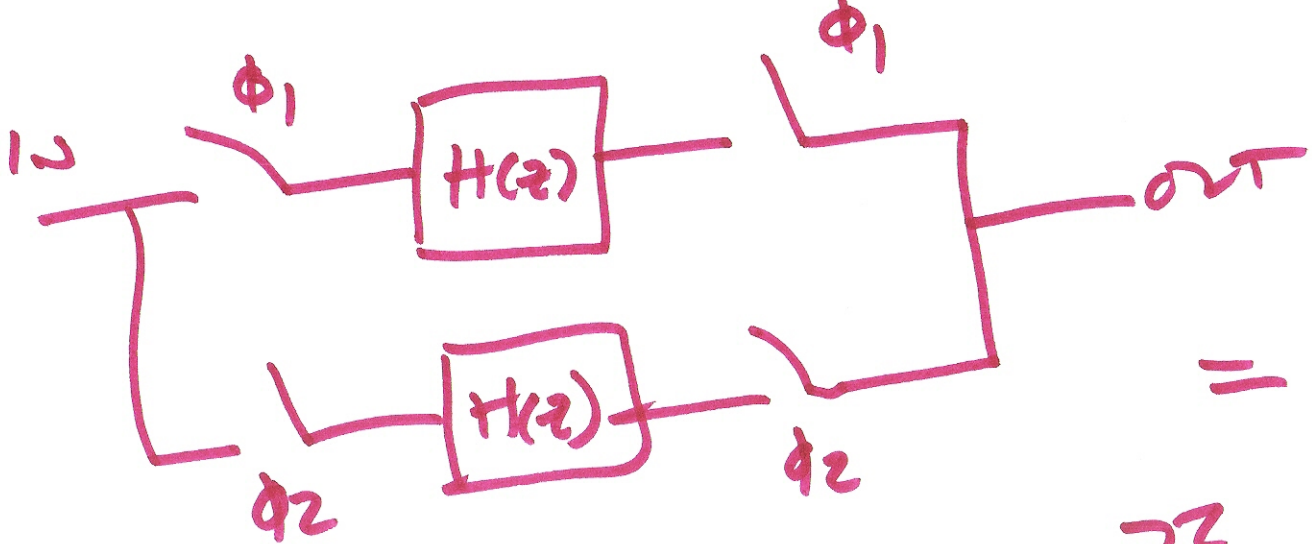




3)





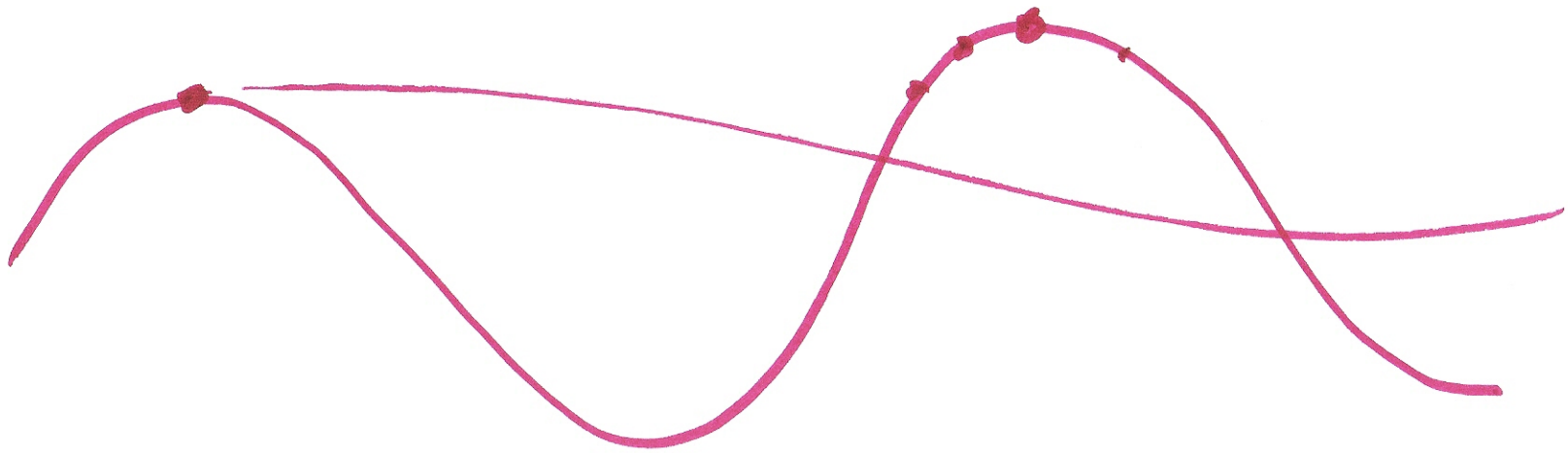


$$= H(z^2)$$

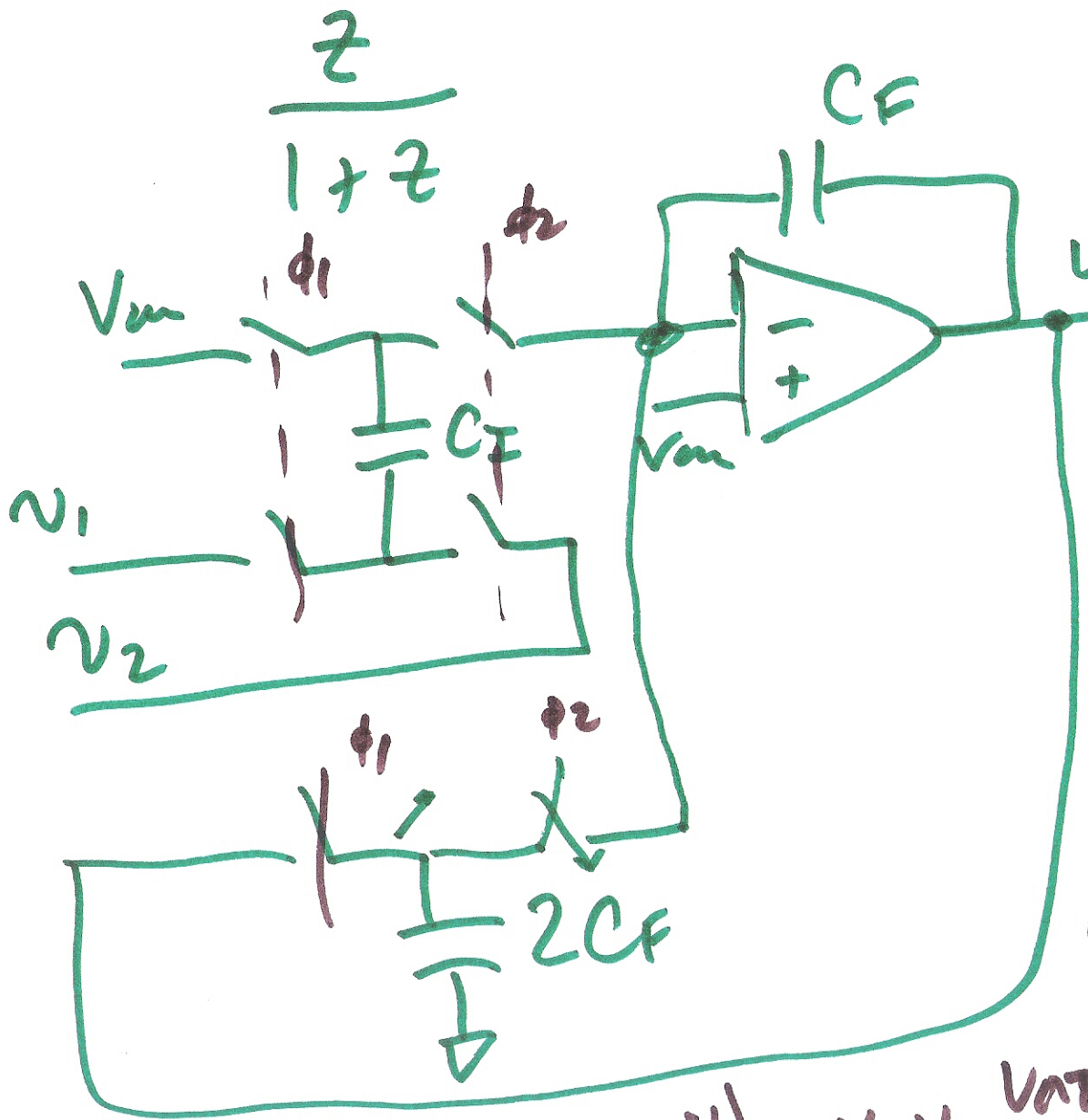
$$\frac{z^2}{1+z^2}$$

4)

$$OSR = \frac{f_s}{2B}$$



5)



$$\frac{V_1 z^{-1/2} - V_2}{1 - z^{-1}} \frac{C_I}{C_F}$$

$$\frac{V_1 - V_2}{1 - z^{-1}} = V_{OUT}$$

$$\frac{z}{1+z}$$

$$Q_1^{\phi_1} = V_1 C_I + V_{OUT} \cdot 2C_F$$

$$Q_2^{\phi_2} = V_2 \cdot C_I + 2C_F V_{OUT}$$

$$V_{OUT} \cdot C_F = (V_1 - V_2) C_I + V_{OUT}(n-1)\, 2C_F$$

b)

$$V_{OUT}(z) \cdot C_F (1 - z^{-1/2}) = V_1 - V_2 \cdot C_I$$