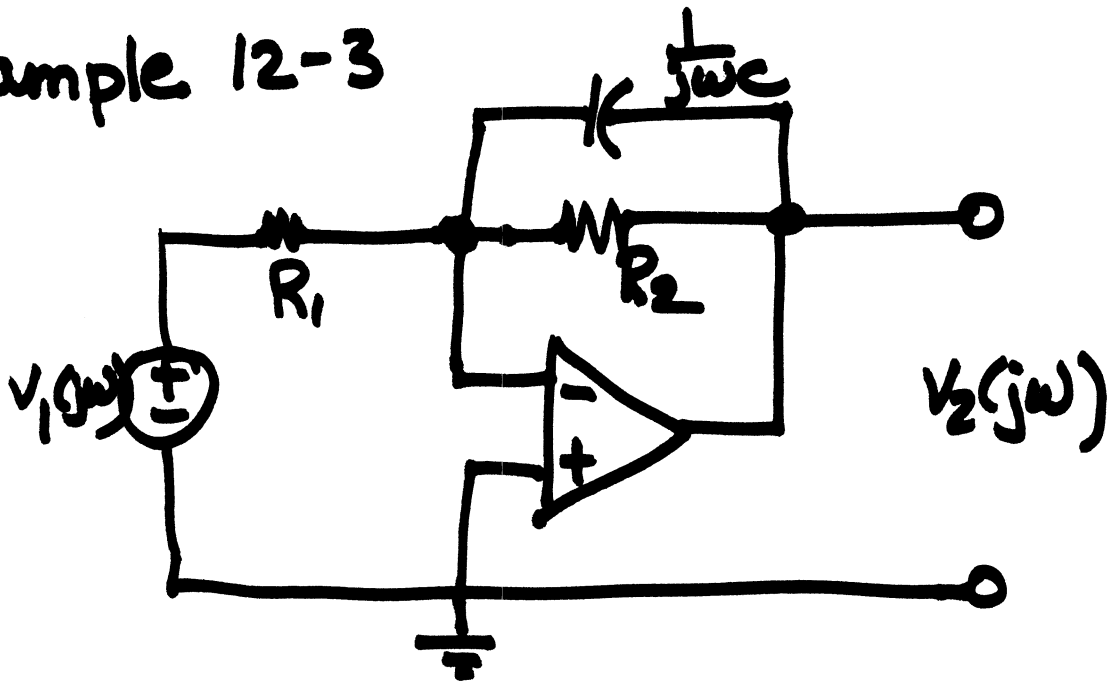


Example 12-3

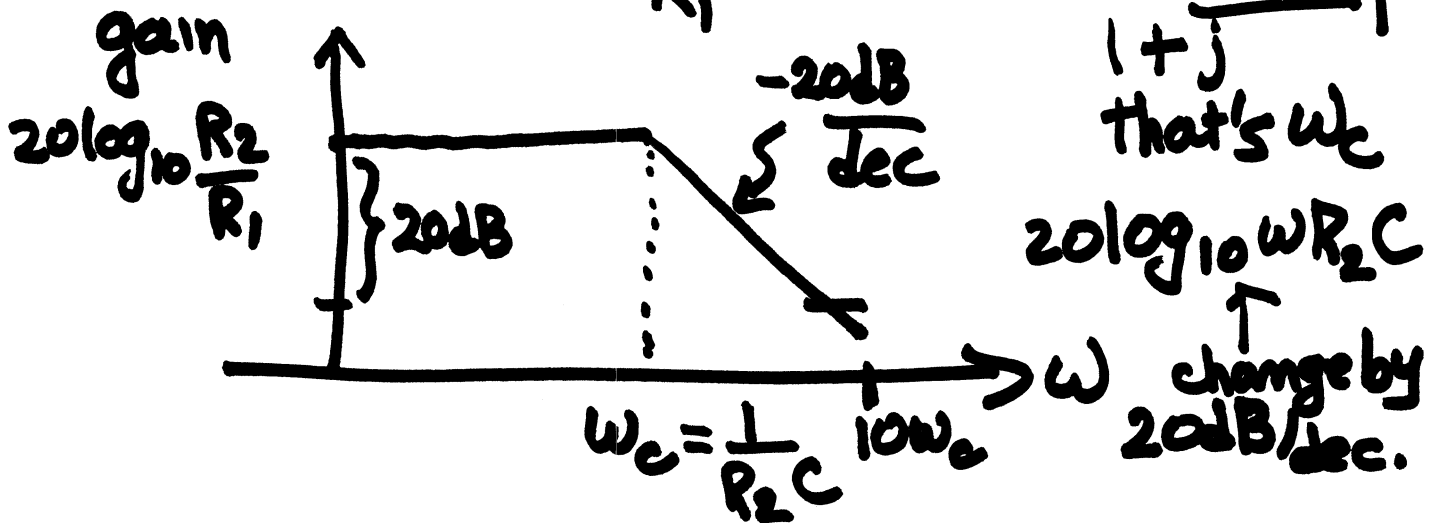


$$T_V(j\omega) = \frac{V_2(j\omega)}{V_1(j\omega)} = \frac{-R_2/R_1}{1 + j\omega R_2 C}$$

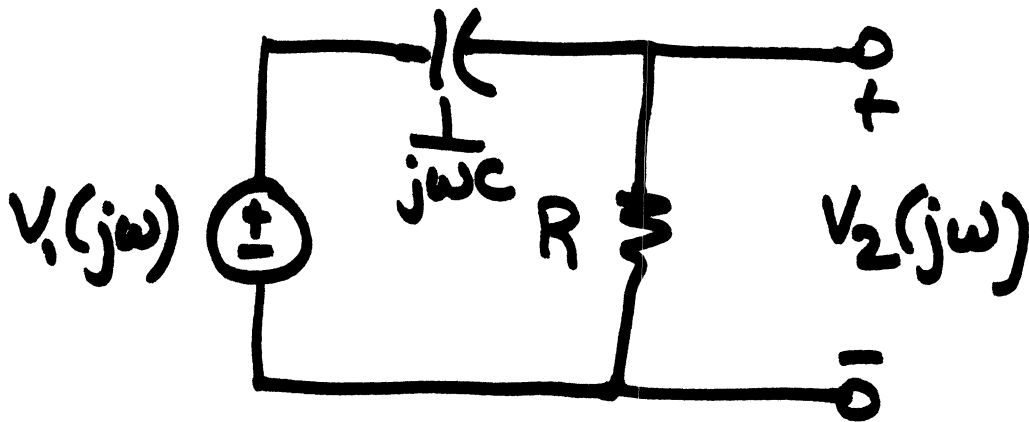
$$20 \log_{10} |T_V(j\omega)| = 20 \log_{10} \left| \frac{R_2}{R_1} \right|$$

$$- 20 \log_{10} |1 + j\omega R_2 C|$$

$$= 20 \log_{10} \frac{R_2}{R_1} - 20 \log_{10} |1 + j\omega R_2 C|$$



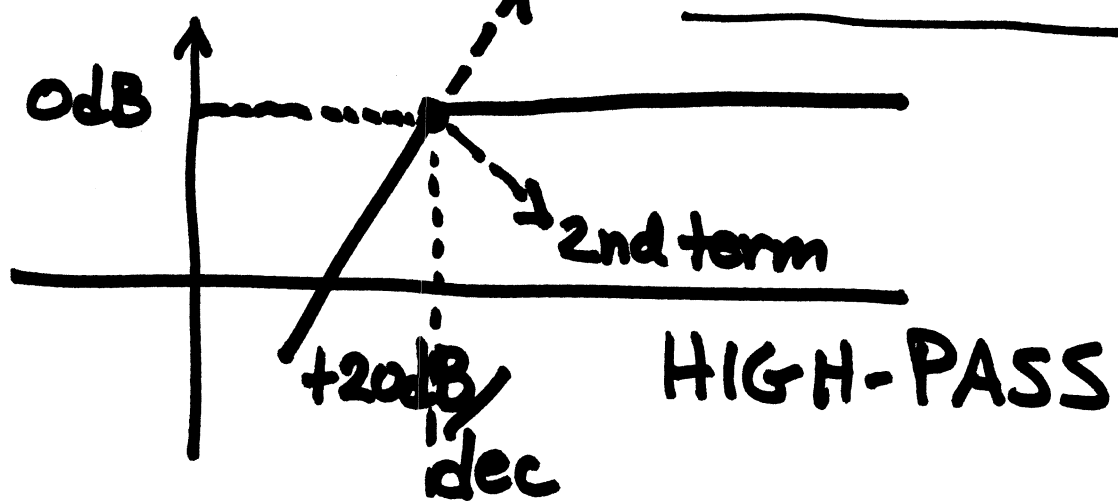
Example 12-5



$$T_v(j\omega) = \frac{V_2(j\omega)}{V_1(j\omega)} = \frac{R}{R + \frac{1}{j\omega c}} = \frac{j\omega RC}{1 + j\omega RC}$$

$$20 \log_{10} |T_v(j\omega)| = 20 \log_{10} |j\omega RC| - 20 \log_{10} |1 + j\omega RC|$$

$$= 20 \log_{10} \omega RC - \underline{20 \log_{10} |1 + j\omega RC|}$$



$$\omega_c = \frac{1}{RC}$$

i.e. $\omega RC = 1$