

$$C = B(1+S/N)$$

$$B = 50\text{Hz} - 3500\text{Hz} = 3450\text{Hz}$$

$$S/N = 39\text{DB} = 10^{(39/10)} = 10^{(3.9)}$$

$$\mathbf{C = 3450(1+10^{(3.9)}) = 44697.169}$$