

Meisel ⑥

MTE3 -2006

$$17. \quad 120 \text{ dB} = 10 \log_{10} \frac{I_{\text{concert}}}{I_0}$$

$$70 \text{ dB} = 10 \log_{10} \frac{I_{13 \text{ st.}}}{I_0}$$

$$50 \text{ dB} = 10 \log_{10} \frac{I_{\text{concert}}}{I_{13 \text{ st.}}} \Rightarrow \frac{I_{\text{concert}}}{I_{13 \text{ st.}}} = \underline{10^5}$$

18.



$$V_t = 20 \frac{\text{m}}{\text{s}}$$



$$V_c = 15 \frac{\text{m}}{\text{s}}$$

$$f_s = 600 \text{ Hz}$$

$$f_0 = ?$$

$$V = 340 \frac{\text{m}}{\text{s}}$$

$$f_0 = \frac{V \pm V_o}{V \mp V_s} f_s$$

$$f_0 = \frac{(340 \frac{\text{m}}{\text{s}} + 20 \frac{\text{m}}{\text{s}})}{(340 \frac{\text{m}}{\text{s}} + 15 \frac{\text{m}}{\text{s}})} 600 \text{ Hz} = \left( \frac{360}{355} \right) (600 \text{ Hz})$$

$$= \underline{608 \text{ Hz}}$$