

12) 13)  $1W \longrightarrow 200 \text{ mPa}$

$2W \longrightarrow \sqrt{2} \text{ time}$

$$\Rightarrow \text{dB} = 2 \times 10 \log_{10} \left( \frac{200 \text{ mPa}}{20 \mu\text{Pa}} \right)$$

$$\text{dB} = 80 \text{ dB SPL}$$

$$80 \text{ dB SPL} + 3 \text{ dB SPL}$$

$$\Rightarrow 83 \text{ dB SPL}$$

$$P_{\text{rms}} \propto \sqrt{P_{\text{aver}}}$$

$$\underline{\underline{282-83 \text{ mPa}}}$$