

Devis

* QCM 23, B

$$r_1 = 5m : n_1 = 110 = 10 \log \frac{W_1}{W_0} \Leftrightarrow \frac{W_1}{W_0} = 10^{11} \Leftrightarrow W_1 = 10^{-1} \text{ W/m}^2$$

$$r_2 = 50m : n_2 = n_1 + 20 \log \frac{r_1}{r_2} = 90 \Leftrightarrow \frac{W_2}{W_0} = 10^9 \Leftrightarrow W_2 = 10^{-3} \text{ W/m}^2$$

* QCM 24, B D

$$r_2 = 500m : n_2 = n_1 + 20 \log \frac{r_1}{r_2} = 70 \text{ dB} \Leftrightarrow \frac{W_2}{W_0} = 10^7 \Leftrightarrow W_2 = 10^{-5} \text{ W/m}^2$$

$$r_2 = 0,5m : n_2 = n_1 + 20 \log \frac{r_1}{r_2} = 130 \text{ dB} \Leftrightarrow \frac{W_2}{W_0} = 10^{13} \Leftrightarrow W_2 = 10 \text{ W/m}^2$$

* QCM 25, A

$$r = 5m$$

$$\begin{array}{c} \text{air} \quad -15 \quad \text{verre} \quad -15 \quad \text{air} \\ n=110 \quad \quad \quad \quad n'=80 \end{array}$$

* QCM 26, C

$$r = 50m$$

$$\begin{array}{c} \text{air} \quad -15 \quad \text{verre} \quad -15 \quad \text{air} \\ n=90 \quad \quad \quad \quad n'=60 \end{array}$$

* QCM 27, 1

$$r = 50m$$

$$\begin{array}{l} \text{C.A. : } n = 60 - 15 \\ \text{C.O. : } n = 60 - 30 \end{array} \left| \begin{array}{l} \text{La C.A. prend le dessus} \\ n = 60 - 15 = 45 \end{array} \right.$$

* QCM 28, E

$$r = 5m$$

$$\begin{array}{l} \text{C.A. : } n = 80 - 15 \\ \text{C.O. : } n = 80 - 30 \end{array} \left| \begin{array}{l} \text{La C.A. prend le dessus} \\ n = 80 - 15 = 65 \end{array} \right.$$

$$r = 500m$$

$$\begin{array}{c} \text{air} \quad -15 \quad \text{verre} \quad -15 \quad \text{air} \\ n=70 \quad \quad \quad \quad n'=40 \end{array}$$

$$\begin{array}{l} \text{C.A. : } n = 40 - 15 \\ \text{C.O. : } n = 40 - 30 \end{array} \left| \begin{array}{l} \text{La C.A. prend le dessus} \\ n = 40 - 15 = 25 \end{array} \right.$$

* QCM 29, C

$$r = 5m$$

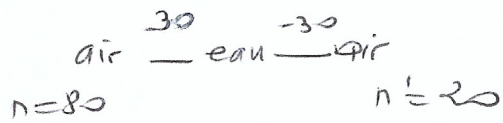
$$\begin{array}{l} \text{source ext. : } n = 80 \\ \text{source int. : } n = 10 \log \frac{10^{-4}}{10^{-12}} = 80 \\ \text{Deux sources : } n = 80 + 3 = 83 \text{ dB} \end{array}$$

$$\left. \begin{array}{l} \text{C.A. : } n = 83 - 15 \\ \text{C.O. : } n = 83 - 30 \end{array} \right\} \begin{array}{l} \text{La C.A. prend le dessus} \\ n = 83 - 15 = 68 \end{array}$$

* PCM 30, D

$$n_2 = n_1 + 20 \log \frac{f_1}{f_2} \quad \text{or} \quad n_1 = n_2 - 20 \log \frac{f_1}{f_2} = 100 \text{ dB}$$

* PCM 31, A



* PCM 32, C