Si m es impar, se sigue:

$$A_m + B_m = \frac{4V_1}{m\pi}$$

$$A_m e^{\frac{m\pi b}{a}} + B_m e^{-\frac{m\pi b}{a}} = \frac{4V_2}{m\pi}$$

Solucionando el sistema 2×2:

$$A_m = \frac{\begin{vmatrix} \frac{4V_1}{m\pi} & 1 \\ \frac{4V_2}{m\pi} & e^{-\frac{m\pi b}{a}} \end{vmatrix}}{\begin{vmatrix} 1 & 1 \\ e^{m\pi b/a} & e^{-m\pi b/a} \end{vmatrix}} = \frac{\frac{4V_1}{m\pi} e^{-m\pi b/a} - \frac{4V_2}{m\pi}}{e^{-\frac{m\pi b}{a}} - e^{\frac{m\pi b}{a}}} = \frac{\frac{4V_2}{m\pi}\left(\frac{V_1}{V_2} e^{-\frac{m\pi b}{a}} - 1\right)}{-2\,\mathrm{Senh}\left(\frac{m\pi b}{a}\right)}$$

$$\boxed{A_m = \frac{2V_2}{m\pi}\left[\frac{1 - \frac{V_1}{V_2} e^{-\frac{m\pi b}{a}}}{\mathrm{Senh}\left(\frac{m\pi b}{a}\right)}\right]}$$

$$B_m = \frac{\begin{vmatrix} 1 & \frac{4V_1}{m\pi} \\ e^{\frac{m\pi b}{a}} & \frac{4V_2}{m\pi} \end{vmatrix}}{-2\,\mathrm{Senh}\left(\frac{m\pi b}{a}\right)} = \frac{\frac{4V_2}{m\pi} - \frac{4V_1}{m\pi} e^{m\pi b/a}}{-2\,\mathrm{Senh}\left(\frac{m\pi b}{a}\right)}$$

$$\boxed{B_m = \frac{\frac{2V_2}{m\pi}\left(\frac{V_1}{V_2} e^{m\pi b/a} - 1\right)}{\mathrm{Senh}\left(\frac{m\pi b}{a}\right)}}$$