(8) Recordar los vectores e_1, e_2 y e_3 dados en la página 12 del apunte. Sea $v = (x_1, x_2, x_3) \in \mathbb{R}^3$. Verificar que

$$v = x_1e_1 + x_2e_2 + x_3e_3 = \langle v, e_1\rangle e_1 + \langle v, e_2\rangle e_2 + \langle v, e_3\rangle e_3.$$

$$\begin{aligned}
k_1e_1 + k_2e_2 + k_3e_3 &= \langle v, e_1\rangle e_1 + \langle v, e_2\rangle e_2 + \langle v, e_3\rangle e_3 \\
k_1(1,0,0) + k_2(0,1,0) + k_3(0,0,1) &= \langle (k_1,k_2,k_3)(1,0,0)\rangle (1,0,0) + \langle (k_1,k_2,k_3)(0,1,0)\rangle (0,1,0) + \langle (k_1,k_2,k_3)(0,0,1)\rangle (0,0,1) \\
(k_1,0,0) + (0,k_2,0) + (0,0,k_3) &= k_1(1,0,0) + k_2(0,1,0) + k_3(0,0,1) \\
(k_1,k_2,k_3) &= (k_1,k_2,k_3)
\end{aligned}$$