

$$E_1(A, F, H) : \vec{x} = \begin{pmatrix} 0 \\ 0 \\ 0 \end{pmatrix} + r \begin{pmatrix} 0 \\ 8 \\ 8 \end{pmatrix} + s \begin{pmatrix} -8 \\ 0 \\ 8 \end{pmatrix}$$

$$E(01018); C(-81810)$$

$$g(E; C) : \vec{x} = \begin{pmatrix} 0 \\ 0 \\ 8 \end{pmatrix} + t \begin{pmatrix} -8 \\ 8 \\ -8 \end{pmatrix}$$

$$g \cap E_1 \Rightarrow \begin{array}{l} 0 - 8t = 0 + 0 \cdot r - 8s \\ 0 + 8t = 0 + 8r + 0 \cdot s \\ 8 - 8t = 0 + 8r + 8s \end{array} \Rightarrow \left(\begin{array}{ccc|c} -8 & 0 & +8 & 0 \\ 8 & -8 & 0 & 0 \\ -8 & -8 & -8 & -8 \end{array} \right)$$

$$\left(\begin{array}{ccc|c} 1 & 0 & 0 & \frac{1}{3} \\ 0 & 1 & 0 & \frac{1}{3} \\ 0 & 0 & 1 & \frac{1}{3} \end{array} \right) \rightarrow t_1 = \frac{1}{3}$$

$$g \cap E_1 = \{S_1\}$$

$$\vec{OS}_1 = \begin{pmatrix} 0 \\ 0 \\ 8 \end{pmatrix} + \frac{1}{3} \begin{pmatrix} -8 \\ 8 \\ -8 \end{pmatrix} = \begin{pmatrix} -\frac{8}{3} \\ \frac{8}{3} \\ \frac{16}{3} \end{pmatrix} \quad \underline{\underline{S_1 \left(-\frac{8}{3} \mid \frac{8}{3} \mid \frac{16}{3} \right)}}$$

$$B(01810) \quad D(-81010) \quad G(-81818)$$

$$E_2(B; D; G) : \vec{x} = \begin{pmatrix} 0 \\ 8 \\ 0 \end{pmatrix} + u \begin{pmatrix} -8 \\ -8 \\ 0 \end{pmatrix} + v \begin{pmatrix} -8 \\ 0 \\ 8 \end{pmatrix}$$

$$g \cap E_2 = \{S_2\}$$

$$\begin{array}{l} 0 - 8t = 0 - 8u - 8v \\ 0 + 8t = 8 - 8u + 0 \cdot v \\ 8 - 8t = 0 + 0 \cdot u + 8v \end{array} \Rightarrow \left(\begin{array}{ccc|c} -8 & +8 & +8 & 0 \\ 8 & +8 & 0 & 8 \\ -8 & 0 & -8 & -8 \end{array} \right)$$

$$\left(\begin{array}{ccc|c} 1 & 0 & 0 & \frac{2}{3} \\ 0 & 1 & 0 & \frac{1}{3} \\ 0 & 0 & 1 & \frac{1}{3} \end{array} \right) \rightarrow t_2 = \frac{2}{3}$$

$$\vec{OS}_2 = \begin{pmatrix} 0 \\ 0 \\ 8 \end{pmatrix} + \frac{2}{3} \begin{pmatrix} -8 \\ 8 \\ -8 \end{pmatrix} = \begin{pmatrix} -\frac{16}{3} \\ \frac{16}{3} \\ \frac{8}{3} \end{pmatrix} \quad \underline{\underline{S_2 \left(-\frac{16}{3} \mid \frac{16}{3} \mid \frac{8}{3} \right)}}$$