

Résoudre

$$\textcircled{1} \begin{cases} x - y + z = 0 \\ -x + 2z = 0 \\ y - z = 0 \end{cases}$$

$$\textcircled{2} \begin{cases} x + y + 2z = 0 \\ x - y - z = 0 \\ 2x + z = 0 \end{cases}$$

$$\textcircled{3} \begin{cases} x + y + z = 0 \\ 2x + 2y + 2z = 0 \\ 3x + 3y + 3z = 0 \end{cases}$$

$$\textcircled{4} \begin{cases} x + y + z = 1 \\ x - y + 2z = 2 \\ 2x + 3z = 4 \end{cases}$$

$$\textcircled{5} \begin{cases} 2x - y = 1 \\ -x + 2y - z = 2 \\ -y + z = 3 \end{cases}$$

$$\textcircled{6} \begin{cases} x + y + z = 1 \\ x - 2y + 2z = 3 \\ 2x - y + 3z = 4 \end{cases}$$

$$\textcircled{7} \quad x + y - z = 2$$

Solutions

$$\textcircled{1} \quad S = \{(0, 0, 0)\}$$

$$\textcircled{2} \quad S = \text{Vect}((-1, -3, 2))$$

$$\textcircled{3} \quad S = \text{Vect}((-1, 1, 0), (-1, 0, 1))$$

$$\textcircled{4} \quad S = \emptyset$$

$$\textcircled{5} \quad S = \{(6, 11, 14)\}$$

$$\textcircled{6} \quad S = \left\{ \left(\frac{5}{3}, -\frac{2}{3}, 0 \right) + \text{Vect}\left(-\frac{4}{3}, \frac{1}{3}, 1\right) \right\}$$

$$\textcircled{7} \quad S = \{(2, 0, 0)\} + \text{Vect}((-1, 1, 0), (1, 0, 1))$$