$$
\begin{array}{l}
 \\
2 \\
2
\end{array}
\begin{cases}
2x_1 - x_2 + 4x_3 + x_4 = 1 \\
3x_1 + 2x_2 - 3x_3 + 2x_4 = 2 \\
-5x_1 + 3x_2 - x_3 + x_4 = 1
\end{cases}
$$

$$
\begin{array}{c}
\\
2 \\
2
\end{array}
\left\{
\begin{array}{rrrrl}
2x_1 & - & x_2 & + 4x_3 & + \; x_4 = 1 \\
3x_1 & + 2x_2 & - 3x_3 & + 2x_4 & = 2 \\
-5x_1 & + 3x_2 & - \; x_3 & + \; x_4 & = 1
\end{array}
\right.
\iff
\begin{array}{c}
5 \quad -3 \\
\downarrow \quad \downarrow
\end{array}
\left\{
\begin{array}{rrrrl}
2x_1 & - & x_2 & + 4x_3 & + \; x_4 = 1 \\
6x_1 & + 4x_2 & - 6x_3 & + 4x_4 & = 4 \\
-10x_1 & + 6x_2 & - 2x_3 & + 2x_4 & = 2
\end{array}
\right.
\iff
$$

$$
\begin{array}{c}
\\
2 \\
2
\end{array}
\left\{
\begin{aligned}
2x_1 - x_2 + 4x_3 + x_4 &= 1 \\
3x_1 + 2x_2 - 3x_3 + 2x_4 &= 2 \\
-5x_1 + 3x_2 - x_3 + x_4 &= 1
\end{aligned}
\right.
\iff
\begin{array}{c}
5 \quad -3 \\
\downarrow \quad \downarrow \\
\left\{
\begin{aligned}
2x_1 - x_2 + 4x_3 + x_4 &= 1 \\
6x_1 + 4x_2 - 6x_3 + 4x_4 &= 4 \\
-10x_1 + 6x_2 - 2x_3 + 2x_4 &= 2
\end{aligned}
\right.
\end{array}
\iff
$$

$$
\iff \Downarrow\uparrow
\left\{
\begin{aligned}
2x_1 - x_2 + 4x_3 + x_4 &= 1 \\
7x_2 - 18x_3 + x_4 &= 1 \\
x_2 + 18x_3 + 7x_4 &= 7
\end{aligned}
\right.
\iff
$$

$$
\begin{array}{c}
\\
2 \\
2
\end{array}
\left\{
\begin{aligned}
2x_1 - x_2 + 4x_3 + x_4 &= 1 \\
3x_1 + 2x_2 - 3x_3 + 2x_4 &= 2 \\
-5x_1 + 3x_2 - x_3 + x_4 &= 1
\end{aligned}
\right.
\iff
\begin{array}{c}
5 \quad -3 \\
\downarrow \quad \downarrow
\end{array}
\left\{
\begin{aligned}
2x_1 - x_2 + 4x_3 + x_4 &= 1 \\
6x_1 + 4x_2 - 6x_3 + 4x_4 &= 4 \\
-10x_1 + 6x_2 - 2x_3 + 2x_4 &= 2
\end{aligned}
\right.
\iff
$$

$$
\iff \Downarrow
\left\{
\begin{aligned}
2x_1 - x_2 + 4x_3 + x_4 &= 1 \\
7x_2 - 18x_3 + x_4 &= 1 \\
x_2 + 18x_3 + 7x_4 &= 7
\end{aligned}
\right.
\iff
\begin{array}{c}
-7 \\
\downarrow
\end{array}
\left\{
\begin{aligned}
2x_1 - x_2 + 4x_3 + x_4 &= 1 \\
x_2 + 18x_3 + 7x_4 &= 7 \\
7x_2 - 18x_3 + x_4 &= 1
\end{aligned}
\right.
$$

$$
\begin{array}{c}
\\
2 \\
2
\end{array}
\left\{
\begin{aligned}
2x_1 - x_2 + 4x_3 + x_4 &= 1 \\
3x_1 + 2x_2 - 3x_3 + 2x_4 &= 2 \\
-5x_1 + 3x_2 - x_3 + x_4 &= 1
\end{aligned}
\right.
\iff
\begin{array}{c}
5 \quad -3 \\
\downarrow \quad \downarrow
\end{array}
\left\{
\begin{aligned}
2x_1 - x_2 + 4x_3 + x_4 &= 1 \\
6x_1 + 4x_2 - 6x_3 + 4x_4 &= 4 \\
-10x_1 + 6x_2 - 2x_3 + 2x_4 &= 2
\end{aligned}
\right.
\iff
$$

$$
\iff
\left\{
\begin{aligned}
2x_1 - x_2 + 4x_3 + x_4 &= 1 \\
7x_2 - 18x_3 + x_4 &= 1 \\
x_2 + 18x_3 + 7x_4 &= 7
\end{aligned}
\right.
\iff
\begin{array}{c}
\\
-7 \\
\downarrow
\end{array}
\left\{
\begin{aligned}
2x_1 - x_2 + 4x_3 + x_4 &= 1 \\
x_2 + 18x_3 + 7x_4 &= 7 \\
7x_2 - 18x_3 + x_4 &= 1
\end{aligned}
\right.
\iff
$$

$$
\iff
\begin{array}{c}
\\
\\
\frac{-1}{48}
\end{array}
\left\{
\begin{aligned}
2x_1 - x_2 + 4x_3 + x_4 &= 1 \\
x_2 + 18x_3 + 7x_4 &= 7 \\
-144x_3 - 48x_4 &= -48
\end{aligned}
\right.
$$

$$
\begin{array}{c}
\\ 2 \\ 2
\end{array}
\left\{\begin{array}{rcl}
2x_1 - x_2 + 4x_3 + x_4 &=& 1 \\
3x_1 + 2x_2 - 3x_3 + 2x_4 &=& 2 \\
-5x_1 + 3x_2 - x_3 + x_4 &=& 1
\end{array}\right.
\Longleftrightarrow
\begin{array}{c}
5 \quad -3 \\ \downarrow \quad \downarrow
\end{array}
\left\{\begin{array}{rcl}
2x_1 - x_2 + 4x_3 + x_4 &=& 1 \\
6x_1 + 4x_2 - 6x_3 + 4x_4 &=& 4 \\
-10x_1 + 6x_2 - 2x_3 + 2x_4 &=& 2
\end{array}\right.
\Longleftrightarrow
$$

$$
\Longleftrightarrow
\left\{\begin{array}{rcl}
2x_1 - x_2 + 4x_3 + x_4 &=& 1 \\
7x_2 - 18x_3 + x_4 &=& 1 \\
x_2 + 18x_3 + 7x_4 &=& 7
\end{array}\right.
\Longleftrightarrow
\begin{array}{c}
-7 \\ \downarrow
\end{array}
\left\{\begin{array}{rcl}
2x_1 - x_2 + 4x_3 + x_4 &=& 1 \\
x_2 + 18x_3 + 7x_4 &=& 7 \\
7x_2 - 18x_3 + x_4 &=& 1
\end{array}\right.
\Longleftrightarrow
$$

$$
\Longleftrightarrow
\begin{array}{c}
\\ \\ \frac{-1}{48}
\end{array}
\left\{\begin{array}{rcl}
2x_1 - x_2 + 4x_3 + x_4 &=& 1 \\
x_2 + 18x_3 + 7x_4 &=& 7 \\
-144x_3 - 48x_4 &=& -48
\end{array}\right.
\Longleftrightarrow
\left\{\begin{array}{rcl}
2x_1 - x_2 + 4x_3 + x_4 &=& 1 \\
x_2 + 18x_3 + 7x_4 &=& 7 \\
3x_3 + x_4 &=& 1
\end{array}\right.
$$

$$\begin{cases} 2x_1 - x_2 + 4x_3 + x_4 = 1 \\ x_2 + 18x_3 + 7x_4 = 7 \\ 3x_3 + x_4 = 1 \end{cases}$$

$$\begin{cases} 2x_1 - x_2 + 4x_3 + x_4 = 1 \\ \qquad x_2 + 18x_3 + 7x_4 = 7 \\ \qquad\qquad 3x_3 + x_4 = 1 \end{cases} \Longrightarrow \begin{cases} x_1 = \frac{1}{2}(1 + x_2 - 4x_3 - x_4) \\ x_2 = 7 - 18x_3 - 7x_4 \\ x_3 = \frac{1}{3}(1 - x_4) \\ x_4 = \end{cases}$$

$$\begin{cases} 2x_1 - x_2 + 4x_3 + x_4 = 1 \\ \qquad x_2 + 18x_3 + 7x_4 = 7 \\ \qquad\qquad 3x_3 + x_4 = 1 \end{cases} \Longrightarrow \begin{cases} x_1 = \frac{1}{2}(1 + x_2 - 4x_3 - x_4) \\ x_2 = 7 - 18x_3 - 7x_4 \\ x_3 = \\ x_4 = 1 - 3x_3 \end{cases}$$

$$\begin{cases} 2x_1 - x_2 + 4x_3 + x_4 = 1 \\ \qquad x_2 + 18x_3 + 7x_4 = 7 \\ \qquad\qquad 3x_3 + x_4 = 1 \end{cases} \Longrightarrow \begin{cases} x_1 = \frac{1}{2}(1 + x_2 - 4x_3 - x_4) \\ x_2 = 7 - 18x_3 - 7x_4 \\ x_3 = t \\ x_4 = 1 - 3x_3 \end{cases}$$

$$\begin{cases} 2x_1 - x_2 + 4x_3 + x_4 = 1 \\ \qquad x_2 + 18x_3 + 7x_4 = 7 \\ \qquad\qquad 3x_3 + x_4 = 1 \end{cases} \Longrightarrow \begin{cases} x_1 = \frac{1}{2}(1 + x_2 - 4x_3 - x_4) \\ x_2 = 7 - 18x_3 - 7x_4 \\ x_3 = t \\ x_4 = 1 - 3t \end{cases}$$

$$\begin{cases} 2x_1 - x_2 + 4x_3 + x_4 = 1 \\ x_2 + 18x_3 + 7x_4 = 7 \\ 3x_3 + x_4 = 1 \end{cases} \Longrightarrow \begin{cases} x_1 = \frac{1}{2}(1 + x_2 - 4x_3 - x_4) \\ x_2 = 7 - 18t - 7(1 - 3t) \\ x_3 = t \\ x_4 = 1 - 3t \end{cases}$$

$$\begin{cases} 2x_1 - x_2 + 4x_3 + x_4 = 1 \\ \qquad x_2 + 18x_3 + 7x_4 = 7 \\ \qquad\qquad 3x_3 + x_4 = 1 \end{cases} \Longrightarrow \begin{cases} x_1 = \frac{1}{2}(1 + x_2 - 4x_3 - x_4) \\ x_2 = 3t \\ x_3 = t \\ x_4 = 1 - 3t \end{cases}$$

$$\begin{cases} 2x_1 - x_2 + 4x_3 + x_4 = 1 \\ \qquad x_2 + 18x_3 + 7x_4 = 7 \\ \qquad\qquad 3x_3 + x_4 = 1 \end{cases} \Longrightarrow \begin{cases} x_1 = \frac{1}{2}(1 + 3t - 4t - (1 - 3t)) \\ x_2 = 3t \\ x_3 = t \\ x_4 = 1 - 3t \end{cases}$$

$$\begin{cases} 2x_1 - x_2 + 4x_3 + x_4 = 1 \\ \qquad x_2 + 18x_3 + 7x_4 = 7 \\ \qquad\qquad 3x_3 + x_4 = 1 \end{cases} \Longrightarrow \begin{cases} x_1 = t \\ x_2 = 3t \\ x_3 = t \\ x_4 = 1 - 3t \end{cases}$$