Step-1

Suppose $x=(x_1,x_2,x_3)$ is the orthogonal vector to the plane spanned by the vectors;

$y = (1,\ 1,\ 2)$ And

$z = (1,\ 2,\ 3)$

Then, $x^T y = 0$ and $x^T z = 0$

This implies;

$$\begin{pmatrix} x_1 & x_2 & x_3 \end{pmatrix}\begin{pmatrix} 1 \\ 1 \\ 2 \end{pmatrix} = 0$$ And

$$\begin{pmatrix} x_1 & x_2 & x_3 \end{pmatrix}\begin{pmatrix} 1 \\ 2 \\ 3 \end{pmatrix} = 0$$

And get;

$$\begin{aligned} x_1 + x_2 + 2x_3 &= 0 \\ x_1 + 2x_2 + 3x_3 &= 0 \end{aligned}$$

Write this as $Ax = 0$ where $A = \begin{bmatrix} 1 & 1 & 2 \\ 1 & 2 & 3 \\ 0 & 0 & 0 \end{bmatrix}$ and made it a square matrix.

Step-2

Apply $R_2 \to R_2 - R_1$ on this, and get $\begin{bmatrix} 1 & 1 & 2 \\ 0 & 1 & 1 \\ 0 & 0 & 0 \end{bmatrix}$

This is the echelon matrix and so, we rewrite the homogeneous equations as;

$$\begin{aligned} x_1 + x_2 + 2x_3 &= 0 \\ x_2 + x_3 &= 0 \end{aligned}$$

Thus;

$$
\begin{aligned}
x_2 &= -x_3 \\
x_1 &= -x_2 - 2x_3 \\
&= x_3 - 2x_3 \\
&= -x_3
\end{aligned}
$$

Put $x_3 = -1$, and get; $\begin{pmatrix} x_1 & x_2 & x_3 \end{pmatrix} = (1,1,-1)$

Therefore $\boxed{x = (1,1,-1)}$ is the vector orthogonal to the plane spanned by y, and z.