Step-1

We know the values of the following: $a+b+c$, $d+e+f$, $g+h+i$, $a+d+g$, $b+e+h$, $c+f+i$, $a+e+i$, $d+h$, $b+f$. Also, we know the values of g and c.

Even by using all these equations, we cannot recover the original matrix. That is, we can get two distinct matrices, which satisfy all the above equations.

Consider the following two examples:

$$\begin{bmatrix} a & b & c \\ d & e & f \\ g & h & i \end{bmatrix} = \begin{bmatrix} 2 & 3 & 1 \\ 3 & 1 & 2 \\ 1 & 2 & 3 \end{bmatrix}$$

$$\begin{bmatrix} a & b & c \\ d & e & f \\ g & h & i \end{bmatrix} = \begin{bmatrix} 3 & 2 & 1 \\ 2 & 1 & 3 \\ 1 & 3 & 2 \end{bmatrix}$$

Step-2

We can go a step further and can write two general examples. Both the following matrices follow all the above equations, yet the matrices are distinct:

$$\begin{bmatrix} a & b & t \\ b & t & a \\ t & a & b \end{bmatrix} \text{and} \begin{bmatrix} b & a & t \\ a & t & b \\ t & b & a \end{bmatrix}$$