

This indicates that there are multiple observations at the same time by different people or machines, but the observations are different.

When the number of data point is 2, the system also can be inconsistent. This situation is the same as $m=3$.

$$\begin{bmatrix} 1 & t_1 & -\frac{1}{2}t_1^2 \\ 1 & t_2 & -\frac{1}{2}t_2^2 \end{bmatrix} \begin{bmatrix} m_1 \\ m_2 \\ m_3 \end{bmatrix} = \begin{bmatrix} y_1 \\ y_2 \end{bmatrix}$$

If $t_1 = t_2$, but $y_1 \neq y_2$, the system will be inconsistent.