

Simultaneous Equations Sudoku

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$$\begin{aligned} c+m+h &= 19 \\ f+e &= 10 \\ k+g+m+c &= 23 \\ g+p &= 11 \\ h+f &= 14 \\ g+m &= 13 \\ a+e+k+h &= 11 \\ k+c+f+a &= 22 \end{aligned}$$

$$\begin{aligned} c+g+k &= 17 \\ f+g+a &= 19 \\ k+m+c &= 16 \\ p+e &= 5 \\ g+m+f &= 22 \\ h+m+a &= 14 \\ e+f+h+k &= 16 \\ f+h &= 22 \end{aligned}$$

$$\begin{aligned} k+g+m+c &= 23 \\ k+m+c &= 16 \end{aligned}$$

$$\begin{aligned} k+g+m+c - (k+m+c) &= 23-16 \\ k-k+g+m-m+c-c &= 23-16 \end{aligned}$$

$$g = 7$$

$$\begin{aligned} g+p &= 11 \\ 7+p &= 11 \\ p &= 11-7 \\ p &= 4 \end{aligned}$$

$$\begin{aligned} p+e &= 5 \\ 4+e &= 5 \\ e &= 5-4 \\ e &= 1 \end{aligned}$$

$$\begin{aligned} f+e &= 10 \\ f+1 &= 10 \\ f &= 10-1 \\ f &= 9 \end{aligned}$$

$$\begin{aligned} h+f &= 14 \\ h+9 &= 14 \\ h &= 14-9 \\ h &= 5 \end{aligned}$$

$$\begin{aligned} a+g+f &= 19 \\ a+7+9 &= 19 \\ a+16 &= 19 \\ a &= 19-16 \\ a &= 3 \end{aligned}$$

$$\begin{aligned} h+m+a &= 14 \\ 5+m+3 &= 14 \\ m &= 14-5-3 \\ m &= 6 \end{aligned}$$

$$\begin{aligned} c+m+h &= 19 \\ c+6+5 &= 19 \\ c &= 19-5-6 \\ c &= 8 \end{aligned}$$

$$\begin{aligned} c+g+k &= 17 \\ 8+7+k &= 17 \\ k &= 17-8-7 \\ k &= 2 \end{aligned}$$

$$\begin{aligned} e &= 1 \\ k &= 2 \\ a &= 3 \\ p &= 4 \\ h &= 5 \\ m &= 6 \\ g &= 7 \\ c &= 8 \\ f &= 9 \end{aligned}$$

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|---|---|---|---|---|---|---|---|---|
| 8 | 4 | 6 | 9 | 3 | 1 | 5 | 7 | 2 |
| 5 | 9 | 3 | 4 | 7 | 2 | 8 | 1 | 6 |
| 1 | 2 | 7 | 6 | 8 | 5 | 4 | 9 | 3 |
| 3 | 5 | 1 | 2 | 9 | 7 | 6 | 8 | 4 |
| 7 | 6 | 9 | 5 | 4 | 8 | 2 | 3 | 1 |
| 4 | 8 | 2 | 1 | 6 | 3 | 7 | 5 | 9 |
| 9 | 7 | 5 | 3 | 2 | 6 | 1 | 4 | 8 |
| 6 | 3 | 8 | 7 | 1 | 4 | 9 | 2 | 5 |
| 2 | 1 | 4 | 8 | 5 | 9 | 3 | 6 | 7 |