

***** **Mathematical Weekly** *****
(week four)

What does 100 have to do with {1,2,3,4,5,6,7,8,9} ?

$$\begin{aligned}123 - 45 - 67 + 89 &= 100 \\123 + 4 - 5 + 67 - 89 &= 100 \\123 + 45 - 67 + 8 - 9 &= 100 \\123 - 4 - 5 - 6 - 7 + 8 - 9 &= 100 \\12 - 3 - 4 + 5 - 6 + 7 + 89 &= 100 \\12 + 3 + 4 + 5 - 6 - 7 + 89 &= 100 \\1 + 23 - 4 + 5 + 6 + 78 - 9 &= 100 \\1 + 2 + 34 - 5 + 67 - 8 + 9 &= 100 \\12 + 3 - 4 + 5 + 67 + 8 + 9 &= 100 \\1 + 23 - 4 + 56 + 7 + 8 + 9 &= 100 \\1 + 2 + 3 - 4 + 5 + 6 + 78 + 9 &= 100\end{aligned}$$

$$\begin{aligned}98 - 76 + 54 + 3 + 21 &= 100 \\9 - 8 + 76 + 54 - 32 + 1 &= 100 \\98 - 7 - 6 - 5 - 4 + 3 + 21 &= 100 \\9 - 8 + 7 + 65 - 4 + 32 - 1 &= 100 \\9 - 8 + 76 - 5 + 4 + 3 + 21 &= 100 \\98 - 7 + 6 + 5 + 4 - 3 - 2 - 1 &= 100 \\98 + 7 - 6 + 5 - 4 + 3 - 2 - 1 &= 100 \\98 + 7 + 6 - 5 - 4 - 3 + 2 - 1 &= 100 \\98 + 7 - 6 + 5 - 4 - 3 + 2 + 1 &= 100 \\98 - 7 + 6 + 5 - 4 + 3 - 2 + 1 &= 100 \\98 - 7 + 6 - 5 + 4 + 3 + 2 - 1 &= 100 \\98 + 7 - 6 - 5 + 4 + 3 - 2 + 1 &= 100 \\98 - 7 - 6 + 5 + 4 + 3 + 2 + 1 &= 100 \\9 + 8 + 76 + 5 + 4 - 3 + 2 - 1 &= 100 \\9 + 8 + 76 + 5 - 4 + 3 + 2 + 1 &= 100\end{aligned}$$

You may also start with a negative number:

$$\begin{aligned}-9 + 8 + 76 + 5 - 4 + 3 + 21 &= 100 \\-9 + 8 + 7 + 65 - 4 + 32 + 1 &= 100 \\-9 + 8 + 7 + 65 - 4 + 32 + 1 &= 100 \\-9 - 8 + 76 - 5 + 43 + 2 + 1 &= 100\end{aligned}$$

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