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Solution to Problem 1050.

Given numbers 1 through 31, there are $\binom{31}{30} = 465$ pairs of numbers (not considering the order of the two numbers).

Each ticket has six numbers. Therefore, given any ticket, there are $\binom{6}{5} = 15$ pairs of numbers. To get each pair of numbers appear on exactly one of the tickets, we need $465/15 = 31$ tickets.

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