1. Grundy's Game. This two-player game starts with a pile of $n$ counters. Each turn, a player must divide one of the remaining piles into two pile of different sizes. Play this game with your partner, noting that for even values of $n$, the first player wins by the Tweedledum and Tweedledee principle.
2. Calculate the Grundy values of Grundy's games $G(n)$, for initial pile sizes up to 40 .

| $n$ | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | $\ldots$ | 40 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $G(G(n))$ | 0 | 0 | 0 | 1 | 0 | 2 | 1 | 0 | $\ldots$ |  |

