

one solution:

Start by opening n -th box, where n is their own #.

- If they find their number, great.
- If not, they look at whatever number was found, say m , and proceed to open the m -th box.
- Continue process, opening box corresponding to number they just found.

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|---------------------|---|---|---|---|---|
| <u>Box #</u> | 1 | 2 | 3 | 4 | 5 |
| <u>Box contents</u> | 3 | 5 | 2 | 1 | 4 |

Persönlichkeit: B1 → B3 → B2 → B5 → B4 ✓

Why does this help?
arrange "laps," where each person points
to the next.
eventually ending with the person

you started with.

$$\frac{1}{2^{100}} \rightarrow (0.5)(0.99)(0.98)^{98} \rightarrow 1 - \ln 2$$

$\approx 6.8\% \qquad \approx 30\%$