

Random versus Stochastic

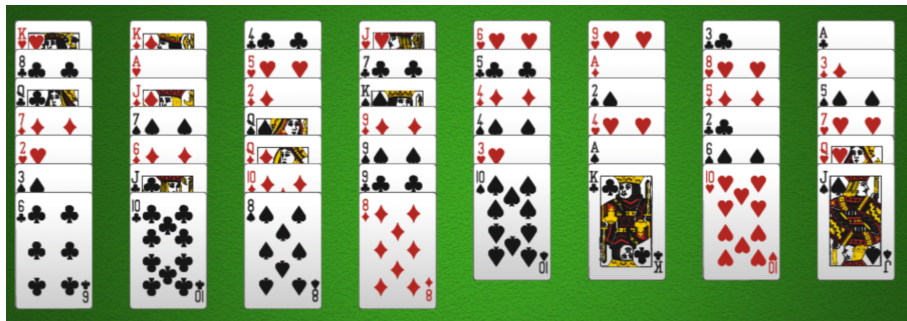
Robert I. Price

Osher Lifelong Learning Institute

A Splash Page

FreeCell

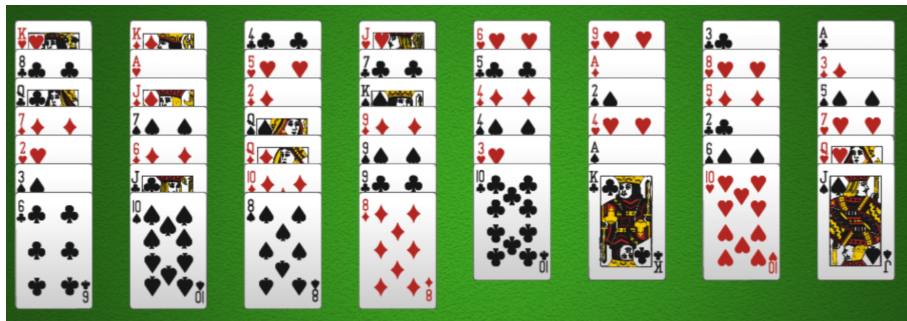
How long would it take to specify all unique patterns ...



... if it takes one second to specify each pattern?

FreeCell

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52 cards

$$52! \text{ seconds} = 8.0658 \dots \times 10^{67} \text{ seconds}$$

$$1 \text{ year}^1 \approx 3.15569259747 \times 10^7 \text{ seconds}$$

$$52! \text{ seconds} \approx 2.556 \times 10^{60} \text{ years}$$

Our universe has existed for $(13.8 \pm 0.4\%) \times 10^9$ years.

$$52! \text{ seconds} \approx 1.852 \times 10^{50} \text{ universes}$$

¹I once specified one year $\approx \pi \times 10^7$ seconds. The professor was not amused.

Random versus Stochastic

We tend to conceive all processes in nature to be characterized by deterministic development.

An effect must have been preceded by a cause.

If each configuration represents a unique thought would you consider the deck of cards to be self-aware, prescient or to possess any form of cognition?

Matt Parker presents MENACE: the pile of matchboxes which can learn.