

Here's how to produce a single output character. This is Solitaire (aka Pontifex):

1. **Find the A joker. Move it one card down.** (That is, swap it with the card beneath it.) If the joker is the bottom card of the deck, move it just below the top card.
2. **Find the B joker. Move it two cards down.** If the joker is the bottom card of the deck, move it just below the second card. If the joker is one up from the bottom card, move it just below the top card.

Note: Steps 1 and 2 must be done in order.

3. **Perform a triple cut.** That is, swap the cards above the first joker with the cards below the second joker.

Note: First and second jokers refer to whatever joker is nearest to and farthest from the top of the deck, respectively. Ignore the A and B designations for this step.

Remember the jokers and the cards between them don't move; the other cards move around them. If there are no cards in one of the three sections (either the jokers are adjacent, or one is on top or the bottom), just treat that section as empty and move it anyway.

4. **Perform a count cut.** Look at the bottom card, count down from the top card that number, cut after the card you counted down to, leaving the bottom card on the bottom.

Note: The reason the last card is left in place is to make the step reversible. This is important for mathematical analysis of its security.

A deck with a joker as the bottom card will remain unchanged by this step.

5. **Find the output card.** Look at the top card and count down that many cards. The output card is the card below the one you counted to. If you hit a joker, start over with step 1.

Note: This step does not modify the deck.

6. **Convert the output card to a number**, modulus the alphabet size. This is the next key stream value.