Simplified Solitaire Encryption

Test Cases

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1. **Joker A**

   Tested with 3 test cases, where joker A (27) is at the end, front, and neither end nor front of the deck.

Points	Tested Input	Expected Output
3	11 20 5 19 9 12 16 14 10 25 23 18 22 13 4 28 8 2 24 3 7 1 17 26 15 6 21 **27**	**27** 20 5 19 9 12 16 14 10 25 23 18 22 13 4 28 8 2 24 3 7 1 17 26 15 6 21 11
3	**27** 12 15 7 26 10 28 8 14 11 13 25 19 23 9 3 22 1 20 24 17 18 6 2 16 4 5 21	12 **27** 15 7 26 10 28 8 14 11 13 25 19 23 9 3 22 1 20 24 17 18 6 2 16 4 5 21
2	13 10 19 25 8 12 20 18 26 1 9 22 15 3 17 24 2 21 23 **27** 7 14 5 4 28 11 16 6	13 10 19 25 8 12 20 18 26 1 9 22 15 3 17 24 2 21 23 7 **27** 14 5 4 28 11 16 6

2. **Joker B**

   Tested with 5 test cases, where joker B (28) is at the end, second to end, first, second, and neither end nor front of the deck.

Points	Tested Input	Expected Output
2	15 5 1 7 27 13 22 23 12 18 2 4 14 24 10 26 16 3 25 6 19 8 11 9 20 21 17 **28**	5 **28** 1 7 27 13 22 23 12 18 2 4 14 24 10 26 16 3 25 6 19 8 11 9 20 21 17 15
2	2 6 15 1 7 16 4 12 24 17 27 14 10 11 19 25 8 23 9 21 13 22 20 18 26 5 **28** 3	**28** 6 15 1 7 16 4 12 24 17 27 14 10 11 19 25 8 23 9 21 13 22 20 18 26 5 3 2
2	13 10 19 25 8 12 20 18 26 1 9 22 15 3 17 24 2 21 23 7 27 14 5 4 **28** 11 16 6	13 10 19 25 8 12 20 18 26 1 9 22 15 3 17 24 2 21 23 7 27 14 5 4 11 16 **28** 6
1	**28** 24 17 27 19 22 16 10 25 3 7 11 4 2 21 8 20 5 12 1 15 18 14 23 26 9 6 13	24 17 **28** 27 19 22 16 10 25 3 7 11 4 2 21 8 20 5 12 1 15 18 14 23 26 9 6 13
1	17 **28** 26 25 5 21 23 19 12 13 15 16 18 6 14 20 24 4 11 8 9 27 2 10 3 1 7 22	17 26 25 **28** 5 21 23 19 12 13 15 16 18 6 14 20 24 4 11 8 9 27 2 10 3 1 7 22

3. **Triple Cut**

   Tested with 5 test cases described below.

Case	# of cards before first joker	# of cards after second joker
1	1	1
2	2	2
3	2	0
4	0	2
5	0	0

Points	Tested Input	Expected Output
4	3 27 23 16 17 11 24 15 25 9 18 14 19 1 21 4 13 20 22 7 8 12 2 10 26 5 28 6	6 27 23 16 17 11 24 15 25 9 18 14 19 1 21 4 13 20 22 7 8 12 2 10 26 5 28 3
4	14 6 28 24 5 21 3 11 16 20 23 2 22 8 15 25 4 17 19 26 9 7 13 18 12 27 10 1	10 1 28 24 5 21 3 11 16 20 23 2 22 8 15 25 4 17 19 26 9 7 13 18 12 27 14 6
3	14 2 27 8 7 19 3 22 9 16 15 26 5 6 21 24 13 25 18 11 4 20 10 1 17 23 12 28	27 8 7 19 3 22 9 16 15 26 5 6 21 24 13 25 18 11 4 20 10 1 17 23 12 28 14 2
3	28 20 17 11 13 1 8 3 2 18 21 10 4 22 25 16 5 6 24 7 26 9 14 15 23 27 12 19	12 19 28 20 17 11 13 1 8 3 2 18 21 10 4 22 25 16 5 6 24 7 26 9 14 15 23 27
2	27 11 18 3 9 5 16 22 12 15 10 24 2 6 1 14 21 25 8 7 19 4 20 13 23 17 26 28	27 11 18 3 9 5 16 22 12 15 10 24 2 6 1 14 21 25 8 7 19 4 20 13 23 17 26 28

4. Count Cut

Tested with 6 test cases described below.

Case	# of cards to count
1	1
2	3
3	25
4	26
5	27
6	28

Points	Tested Input	Expected Output
2	10 4 5 7 8 20 14 26 13 3 6 22 21 24 27 18 25 23 19 11 9 15 12 2 28 16 17 1	4 5 7 8 20 14 26 13 3 6 22 21 24 27 18 25 23 19 11 9 15 12 2 28 16 17 10 1
2	5 15 8 14 25 18 17 12 26 24 27 13 7 1 21 6 10 4 22 9 19 28 11 2 16 23 20 3	14 25 18 17 12 26 24 27 13 7 1 21 6 10 4 22 9 19 28 11 2 16 23 20 5 15 8 3
2	2 27 1 28 21 4 26 14 22 16 11 10 23 5 24 20 12 19 3 13 6 9 8 17 7 18 15 25	18 15 2 27 1 28 21 4 26 14 22 16 11 10 23 5 24 20 12 19 3 13 6 9 8 17 7 25
2	14 4 21 13 10 1 5 19 12 28 17 15 3 7 18 8 23 2 9 11 16 20 24 27 22 6 25 26	25 14 4 21 13 10 1 5 19 12 28 17 15 3 7 18 8 23 2 9 11 16 20 24 27 22 6 26
2	18 2 11 8 10 16 4 15 9 1 7 17 13 28 14 12 6 20 22 21 19 26 23 25 24 5 3 27	18 2 11 8 10 16 4 15 9 1 7 17 13 28 14 12 6 20 22 21 19 26 23 25 24 5 3 27
2	16 13 2 27 11 3 9 7 5 14 23 20 17 21 19 15 22 4 26 12 24 10 1 18 25 8 6 28	16 13 2 27 11 3 9 7 5 14 23 20 17 21 19 15 22 4 26 12 24 10 1 18 25 8 6 28

5. Get Key

Tested with 4 test cases, where the value of the first card is 28, 27, and 1 for the first 3 cases, and the last one requires one repetition of getKey.

Points	Tested Input	Expected Key
1	28 13 10 19 25 8 12 20 18 26 1 9 22 15 3 17 24 2 21 23 6 27 14 5 4 11 16 7	16
1	27 6 14 17 15 26 25 20 1 4 3 21 16 23 28 24 9 12 8 13 7 22 10 18 2 19 11 5	24
1	1 24 16 5 4 27 18 19 11 28 15 12 23 22 14 6 13 3 20 9 17 25 2 21 7 8 10 26	14
2	22 1 8 10 28 5 3 6 12 11 14 19 17 15 26 13 7 21 20 9 24 16 27 18 25 2 23 4	11

6. **Encrypt**

Tested with 3 test cases, where the value of the message plus key is less than, equal to, and greater than 26.

Points	Tested Deck	Tested Message	Expected Message
2	13 10 19 25 8 12 20 18 26 1 9 22 15 3 17 24 2 21 23 27 7 14 5 4 28 11 16 6	R	Y
2	13 10 19 25 8 12 20 18 26 1 9 22 15 3 17 24 2 21 23 27 7 14 5 4 28 11 16 6	S	Z
2	13 10 19 25 8 12 20 18 26 1 9 22 15 3 17 24 2 21 23 27 7 14 5 4 28 11 16 6	TK	AA

7. **Decrypt**

Tested with 3 test cases, where the value of the message is less than, equal to, and greater than the key.

Points	Tested Deck	Tested Message	Expected Message
2	15 12 23 22 14 6 13 3 20 9 17 25 2 21 7 8 10 1 27 26 18 28 19 11 24 16 5 4	W	Y
1	15 12 23 22 14 6 13 3 20 9 17 25 2 21 7 8 10 1 27 26 18 28 19 11 24 16 5 4	X	Z
2	15 12 23 22 14 6 13 3 20 9 17 25 2 21 7 8 10 1 27 26 18 28 19 11 24 16 5 4	YO	AA