

CODEBREAKER TIPS

COUNTDOWN	A	B	C	D	CORRECT	CORRECT # WRONG POSITION
9	0	0	0	1	0	0
8	2	2	2	3	0	1
7	3	4	4	5	1	0
6	3	6	6	7	1	1
5	3	7	8	8	1	1
4	3	9	7	9	1	1
3	3	8	9	6	4	0

Here's the last set of four numbers deciphered with two guesses to spare.

9. The starting guess was 0001. I like to guess three of one and one of another so I can get better odds on interpreting the results correctly.
8. I tried again with 2223. If one number was correct, I would have continued guessing with 2s. There would have been a 3/4 chance of being right. However, there was one correct but in the wrong position, so I continued guessing with a 3 because there are more possibilities for the 3 in another position.
7. I guessed column A for the 3 and used the same strategy with 445. Getting only one right, I thought maybe the 3 was right and there are no 4s or 5s.
6. Using the same strategy with 3667, I again thought the 3 might be right and considered my odds are better that a 7 was in the wrong position.
5. I tested column B for the 7 while moving on to 8s. No improvement.
4. I tested column C for the 7 while moving on to 9s. No improvement. At this point I'm out of options for 7s and must conclude that in countdown row #6, one of the 6s was correct but in the wrong position. Column D was the only possibility for a 6. Similarly for countdown row #5, there must be an 8 and column B is the only possibility for an 8. And again countdown row #4 shows there must have been a 9 in column C.
3. 3896 was correct

Multiplicity-weighted probing: Even though I was wrong about the 7 this time, I think the AAAB or AAB strategy is sound. It's also good to test for positions while trying more numbers at the same time. If the 7 would have been correct in countdown row #5, my next guess would have been 3789. I normally try two new numbers if the other positions are locked in.

In another scenario, if I quickly determine more than one number. For example, if I've proven that the first three numbers are correct after guessing 0012, there a lot of remaining possibilities for the final number. Instead of guessing them one at a time (0013, 0014, etc), I will guess 0034, 0056, etc. If a new one is correct like the 6, I know the final result is 0016. But if one is correct but in the wrong position like the 5, I know the final result is 0015.