Mental Math: Multiply 2-digit Numbers X 11

Step	Example
1. Add the two digits.	For 32 X 11 -- 3 + 2 = 5
2. Put the sum in between the original 2 digits.	32 X 11 = 352
If the sum is 2-digits,put the ones digit between and add the tens digit to the hundred.	For 85 X 11 --- 8 + 5 = 13, Put the 3 in the middle and increase the hundreds place by 1, like this… 1 <u>835</u> 935 So, 85 X 11 = 935

Practice

54 X 11	23 X 11	38 X 11	62 X 11	56 X 11	49 X 11
86 X 11	47 X 11	71 X 11	88 X 11	93 X 11	27 X 11

Tens Digit	0	1	2	3	4	5	6	7	8	9
1	110	121	132	13	154	165	176	187	198	209
2	220	231	242	23	264	275	286	297	308	319
3	330	341	352	33	374	385	396	407	418	429
4	440	451	462	43	484	495	506	517	528	539
5	550	561	572	53	594	605	616	627	638	99
6	660	671	682	63	704	715	726	737	748	759
7	770	781	792	73	814	825	836	847	858	869
8	880	891	902	83	924	935	946	957	968	979
9	990	1001	1012	93	1034	1045	1056	1067	1078	1089

1	2	3
4	5	6
7	8	9

Double Dog

Materials:
- Double Dog Boards/Dogs
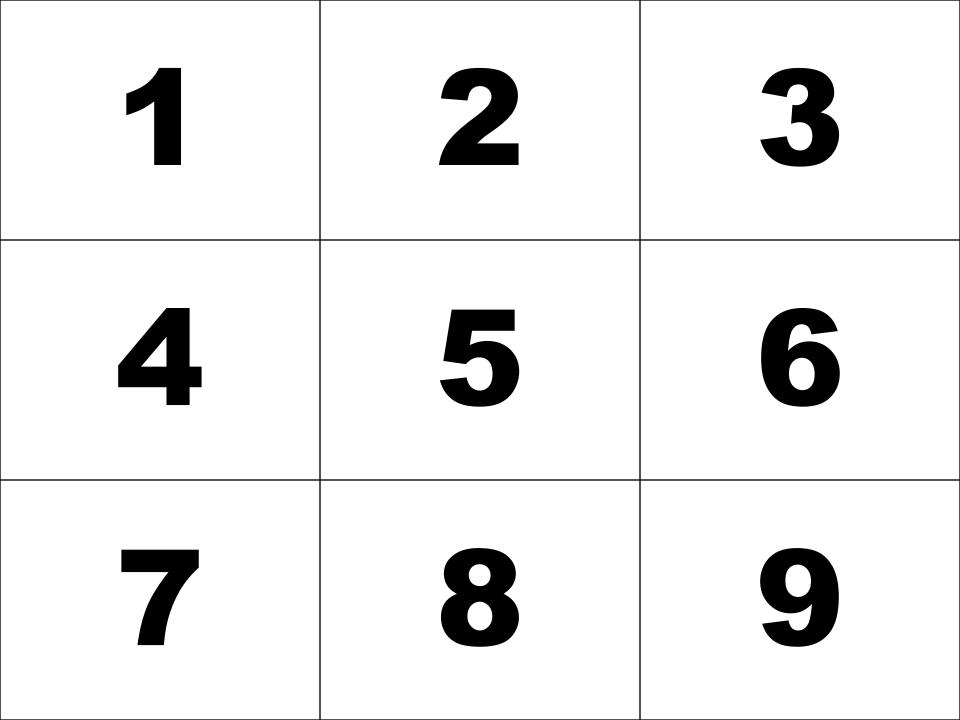- 2 10-sided Dice
- Dry erase boards/markers/erasers

Object of the game: Be the first to scratch off all 9 digits on your Double Dog board.

To play:

1st player rolls both dice and creates a 2-digit number from the results, then multiplies that number X 11 **using mental math only** (no fair writing it down). If he is correct, he can mark out one of the digits in the product from his Double Dog Board. (Note: You can only mark out 1 digit even though your product may contain more digits that you need).

Continue taking turns until one player has marked out all of his/her digits.

If you roll a double, you can either choose to put a guard dog on one of your opponent's digits or take a guard dog off of one of your digits. (Or you can simply multiply by 11 and play it like a regular roll.) If there is a dog on one of your digits, you cannot scratch it off until the dog is removed.

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