

Julia Robinson Mathematics Festival



Cat, Dog, and Mouse Magic, Version 2

A Mind-Reading Number Trick

Inspired by William Wallace Adapted by Nancy Blachman Designed by Freddy Bendekgey

Magic Card Trick (Not a CD)

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to inspire joy in mathematics.

Cat, Dog, and Mouse Magic

A Mind-Reading Number Trick

By William Wallace Adapted by Nancy Blachman Designed by Freddy Bendekgey

Instructions

Ask someone, whom I'll call Rowan, to choose a secret number between 1 and 80. Display one of the four cards with the numbers 1 - 80 and ask Rowan to tell you the color (blue, green, or red) or the animal (cat , dog , or mouse) with the secret number. Repeat this procedure with the other three cards. Then tell the audience Rowan's secret number.





Method: Calculate the secret number as follows: Start off with the number 0 in your head. If Rowan specifies blue (cat), green (dog) or red (mouse), find the smallest blue (cat) or green (dog) number on the card, and add that number to the sum in your head. Don't add anything if red (mouse) is specified. Repeat this procedure for the next three cards. After the 4th card, the sum is the secret number!

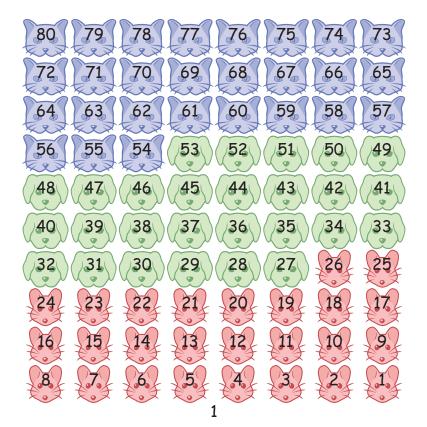
Example: Suppose the player chooses the number 42.

- •On card 1, the number 42 is green (dog) and the smallest green (dog) on that card is 27. So start with 27 as the number in your head.
- On card 2, the number 42 is green (dog) and the smallest green (dog) number on card 2 is 9. So add 9 to the sum in your head to get 36.
- •On card 3, the number 42 is **blue** (cat) and the smallest **blue** (cat) number on card 3 is 6. So add 6 to the total in your head, making the total in your head 42.
- On card 4, the number 42 is red (mouse), in which case, don't add anything. So the number in your head remains 42, the secret number!





Updated on 11/11/25 * For other mathematical activities, games, puzzles, and magic tricks, visit jrmf.org. This trick is licensed under a Creative Commons Attribution License, which lets you distribute, tweak, and build upon these cards as long as you credit jrmf.org for the animal version of this trick.



80 79	78	77	76	75	74	73
72 71	70	69	68	67	66	65
64 63	62	61	60	59	58	57
56 55	54	53	52	51	50	49
48 47	46	45	44)	43	42	41
40 39	38	37	36	35	34	33
32 31	30	29	28	27	26	25
24 23	22	21	20	19	18	17.
16 15	14	13	12	11	10	9.
8, 7,	6.	5,	4	3.	2	1.
		2				

