

# A Mind Reading Game

<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>
1		4	8	16
	3	5	9	17
5		6	10	18
	7	7	11	19
9		10	12	20
	11	11	13	21
13		14	14	22
	15	15	15	23
17		18	24	24
	19	19	25	25
21		22	26	26
	23	23	27	27
25		26	28	28
	27	27	29	29
29		30	30	30
	31	31	31	31

Pick a number and tell me all the columns it is in and  
I will tell you what number you picked!

## A Mind Reading Game - Explanation

Rational for why it works: Based on binary number system (base 2).

<u>E</u>	<u>D</u>	<u>C</u>	<u>B</u>	<u>A</u>
$2^4$	$2^3$	$2^2$	$2^1$	$2^0$
<b>16</b>	<b>8</b>	<b>4</b>	<b>2</b>	<b>1</b>

ex.) 1    1    0    0    1

Student mentally picks 25.

Student verbally calls out columns A, D, and E. (see above columns)

Teacher mentally adds:  $1 + 8 + 16 = 25$