

A Crazy Calendar Version 2

An incredible display of your mental abilities

A student is given several pages that each looks like a calendar. The student selects one of the calendars and then the student selects one of the 30 numbers on it. The student looks at the column their number is in and reads down the column IN ORDER stating the color of each square in that column. They are also told that when they read the color of the square their number IS IN they must “**LIE**” and state the incorrect color.

You do not know the card they selected.

You do not ever see the card or the numbers on the card.

They lie about the color of their number

But you detect the truths and lies and tell them their number.

Crazy Calendar A

71	35	62	53	46
41	5	52	63	76
21	65	32	3	16
60	24	73	42	57
63	27	70	41	54
65	21	76	47	52

Crazy Calendar B

73	51	5	54	32
43	61	35	74	2
23	1	55	14	62
62	40	14	55	23
61	43	17	56	20
67	45	11	50	26

Crazy Calendar Prediction

1. Card A and Card B, should be printed in one color and work just like the first set. The top 3 squares give the 10's digit and the bottom squares give the 1's digit of the students number.
2. Card C and Card D, should be printed in a different color then the first They work the opposite of the first set. The top 3 squares give the 1's digit and the bottom squares give the 10's digit of the students number.

This allows you to hand out 4 cards 2 of each color. One set has the top squares give the 10's digit and the other color works the opposite. Just before you do the trick note which set is which. As the students select a calendar note the color and find their number. If they try to compare cards it will be harder to see a pattern as the cards are not all the same pattern.

How to find their number on card A and B .

The student will look at the column their number is in. They will call out the **colors of the top 3 squares** of the column in order (including the lie if there is one), either white or gray. If we let white =0 and gray = 1 then they will actually call out 3 binary numbers. The first one is put in the 1's place, the second one is placed in the 2's place and the third one is placed in the 4's place. Convert this binary number to base 10 and this will provide the 10's digit of their number

They will call out the **colors of the bottom 3 squares** of the column in order (They will call out the colors of the top 3 squares of the column in order (The first one is put in the 1's place, the second one is placed in the 2's place and the third one is placed in the 4's place. Convert this binary number to base 10 and this will provide the 1's digit of their number

This will give you the number they chose.

Example They select 65 from a column on the card.

	White = 0 Gray = 1	The first 3 binary values in the column determine the 10's digit of their number The last 3 binary values in the column determine the 1's digit of their number
They select 65	They say	The first 3 binary values in the column determine the 10's digit
6	White = 0	0 in 1's place <u> </u> <u> </u> <u> 0</u>
5	Gray = 1	1 in 2's place <u> </u> <u> 1</u> <u> 0</u>
65 (lie)	Gray = 1	1 in 4's place <u> 1</u> <u> 1</u> <u> 0</u> the digit in the 10's place is 6
		The last 3 binary values in the column determine the 1's digit
24	Gray = 1	1 in 1's place <u> </u> <u> </u> <u> 1</u>
27	White = 0	0 in 2's place <u> </u> <u> 0</u> <u> 1</u>
21	Gray = 1	1 in 4's place <u> 1</u> <u> 0</u> <u> 1</u> the digit in the 1's place is 5
		Their number is 65

Crazy Calendar C

52	64	30	46	13
51	67	33	45	10
57	61	35	43	16
43	75	31	57	62
73	45	1	47	52
13	25	61	7	32

Crazy Calendar D

30	17	64	20	73
33	14	67	23	70
35	12	61	25	76
21	6	75	31	62
11	36	45	1	52
71	56	25	61	32

How to find their number on card C and D.

The student will look at the column their number is in. They will call out the **colors of the top 3 squares** of the column in order (including the lie if there is one), either white or gray. If we let white =0 and gray = 1 then they will actually call out 3 binary numbers. The first one is put in the 1's place, the second one is placed in the 2's place and the third one is placed in the 4;s place. Convert this binary number to base 10 and **this will provide the 1's digit of their number**

They will call out the **colors of the bottom 3 squares** of the column in order (They will call out the colors of the top 3 squares of the column in order (The first one is put in the 1's place, the second one is placed in the 2's place and the third one is placed in the 4;s place. Convert this binary number to base 10 and **this will provide the 10's digit of their number**

This will give you the number they chose.

Example They select 65 from a column on the card.

Card C	White = 0 Gray = 1	The first 3 binary values in the column determine the 1's digit of their number The last 3 binary values in the column determine the 10's digit of their number
They select 57	They say	The first 3 binary values in the column determine the 1's digit
52	Gray =1	1 in 1's place <u> </u> <u> </u> <u> 1</u>
51	Gray =1	1 in 2's place <u> </u> <u> 1</u> <u> 1</u>
57 (lie)	Gray =1	1 in 4's place <u> 1</u> <u> 1</u> <u> 1</u> the digit in the 1's place is 7
		The last 3 binary values in the column determine the 10's digit
43	Gray = 1	1 in 1's place <u> </u> <u> </u> <u> 1</u>
73	White = 0	0 in 2's place <u> </u> <u> 0</u> <u> 1</u>
13	Gray = 1	1 in 4's place <u> 1</u> <u> 0</u> <u> 1</u> the digit in the 10's place is 5
		Their number is 57

Binary number $\frac{0}{4}$ $\frac{0}{2}$ $\frac{1}{1}$ 0 0 1 base 2 converts to $0 + 0 + 1 = 1$ base 10
Base 10 value

Binary number $\frac{0}{4}$ $\frac{1}{2}$ $\frac{0}{1}$ 0 1 0 base 2 converts to $0 + 2 + 0 = 2$ base 10
Base 10 value

Binary number $\frac{0}{4}$ $\frac{1}{2}$ $\frac{1}{1}$ 0 1 1 base 2 converts to $0 + 2 + 1 = 3$ base 10
Base 10 value

Binary number $\frac{1}{4}$ $\frac{0}{2}$ $\frac{0}{1}$ 1 0 0 base 2 converts to $4 + 0 + 0 = 4$ base 10
Base 10 value

Binary number $\frac{1}{4}$ $\frac{0}{2}$ $\frac{1}{1}$ 1 0 1 base 2 converts to $4 + 0 + 1 = 5$ base 10
Base 10 value

Binary number $\frac{1}{4}$ $\frac{1}{2}$ $\frac{0}{1}$ 1 1 0 base 2 converts to $4 + 2 + 0 = 6$ base 10
Base 10 value

Binary number $\frac{1}{4}$ $\frac{1}{2}$ $\frac{1}{1}$ 1 1 1 base 2 converts to $4 + 2 + 1 = 7$ base 10
Base 10 value