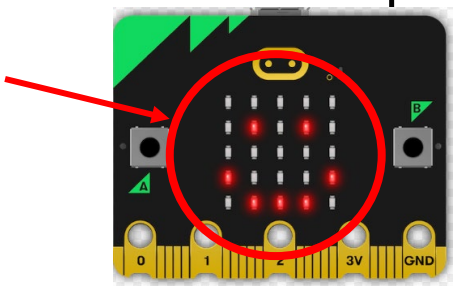
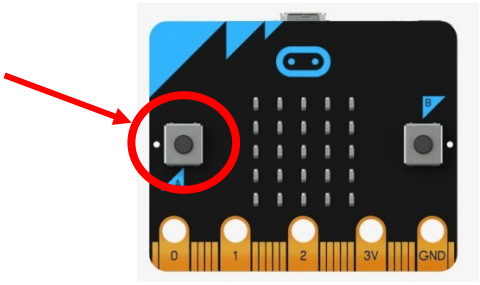
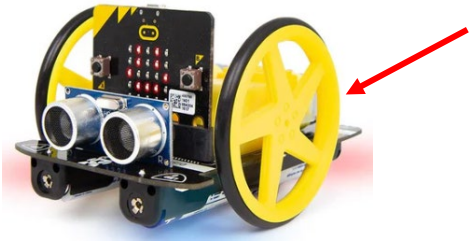
Computing systems – Sorting activity

Monitor 	Mouse 
Printer 	Keyboard 
Speakers 	Digital camera 
Headphones 	Ordering Touchscreen 

Micro:bit display 	Micro:bit buttons 
Beet-Bot buttons 	Barcode scanners 
Controller 	Moving buggy 
Projector 	Microphone 
Ear pods 	Webcam 

Tablet display 	Cloud 
Hard disk drive 	USB stick 
DVD drive 	SD cards 

What storage – scenario activity

I am at home using a computer to create a letter to my friend; I want to finish it the next day so I save it.  What storage device am I using?	I am on a school trip and using the school's digital camera and my photos are being saved.  What storage device is used?
I have been completing a presentation at home and I want to carry the presentation to my friend's house to finish.  What storage device will I use?	I have many holiday photos that I took on my phone; I know they are saved elsewhere.  What storage is used for the backup of your photos?

Computing systems – Sorting activity

Inputs	Storage	Outputs

Computing systems – Matching activity

What inputs would you need?	Karaoke machine 	What outputs would you need?

Computing systems – Matching activity

What inputs would you need?		What outputs would you need?
	Till at a supermarket 	

Computing systems – Matching activity

What inputs would you need?		What outputs would you need?
	Game console 	

Computing systems – Matching activity

What inputs would you need?	Flying a drone 	What outputs would you need?

Computing systems – Matching activity

What inputs would you need?		What outputs would you need?
	Vending machine 	

Computing systems – Matching activity

What inputs would you need?	Car park barrier 	What outputs would you need?

Storing data – Introduction.

Computers store information in their memory. A computer's memory is made up of special switches. To store information in the memory, computers turn these switches on or off.

When a switch is turned on it represents the binary value of 1 and when it is turned off it represents the binary value of 0.

The data stored in one switch is known as a bit.

Storage size – Complete the pyramid

What is the smallest unit of storage in the list?

_____

What is the largest unit of storage in the list?

_____

Can you complete the pyramid?

Gigabyte	Kilobyte	Megabyte
Bit	Terabyte	Byte

Storage size - Match the dominoes

	1,000 gigabytes
	1 or 0
	1,000 kilobytes
	1,000 megabytes
	1,000 bytes
	8 bits

Storage size - Match the dominoes

Megabyte	
Terabyte	
Kilobyte	
Bit	
Gigabyte	
Byte	

Storage size - ANSWERS

Bit	1 or 0
Byte	8 bits
Kilobyte	1,000 bytes
Megabyte	1,000 kilobytes
Gigabyte	1,000 megabytes
Terabyte	1,000 gigabytes

Storage – Binary activity

A computer's memory is where it stores the information that we can use.

The information is stored in the form of 1s and 0s. This is called binary.

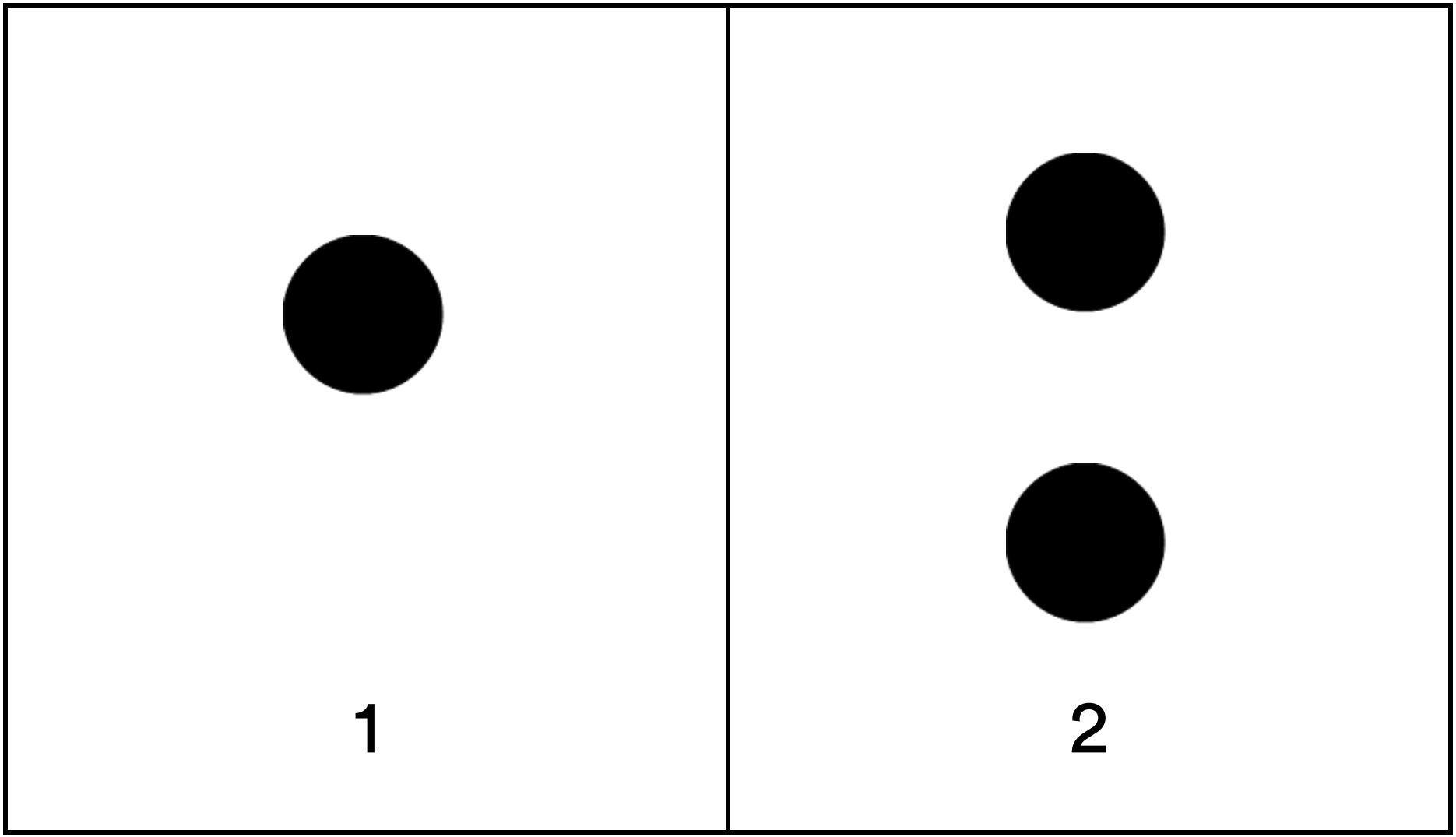
What is binary?

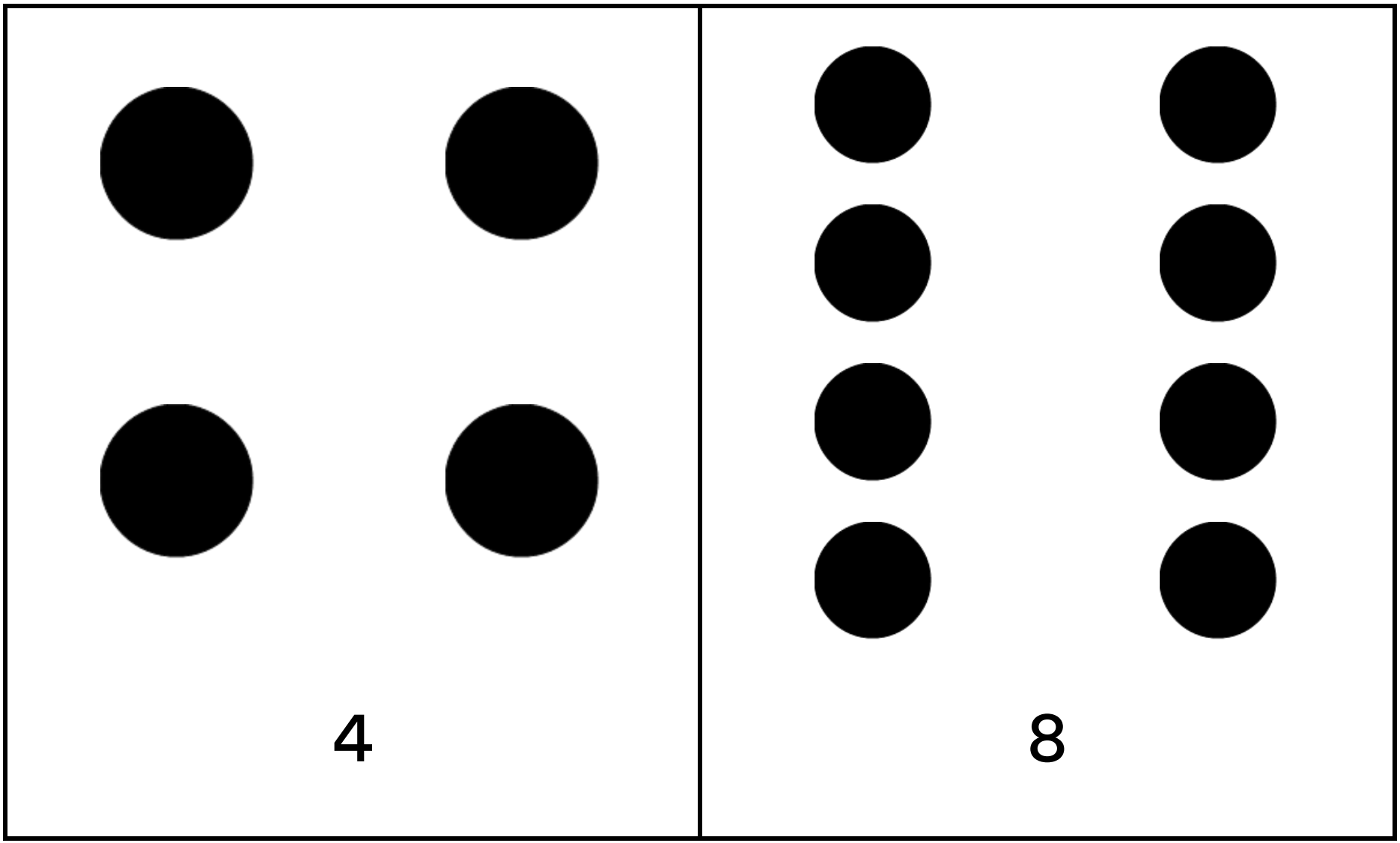
Binary is a system for representing numbers that uses the digits 0 and 1.

It is a base two system because it only uses two digits.

The number system that we use every day, is known as a base 10 system.

It uses ten digits (0,1, 2, 3, 4, 5, 6, 7, 8, 9).


1
2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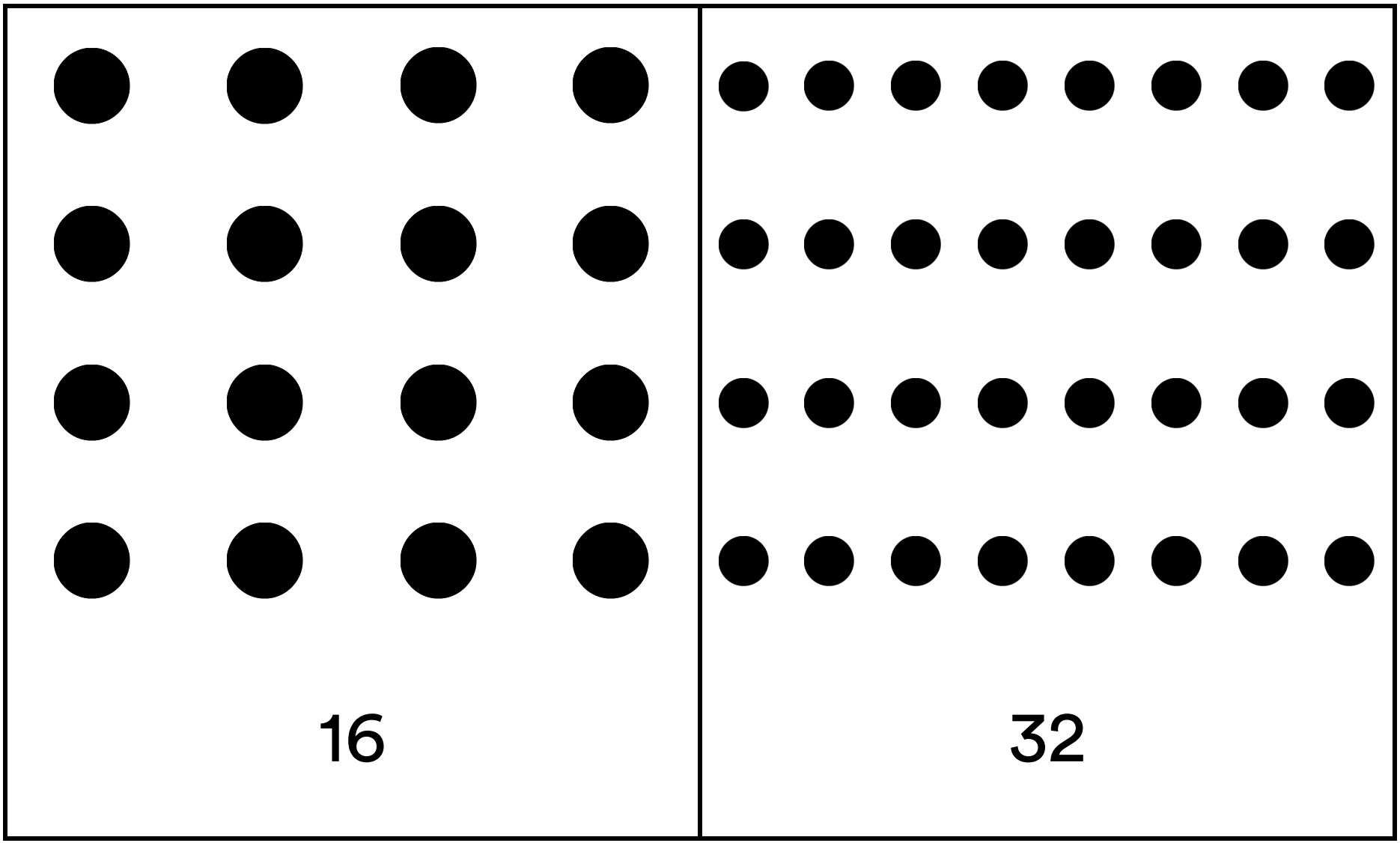
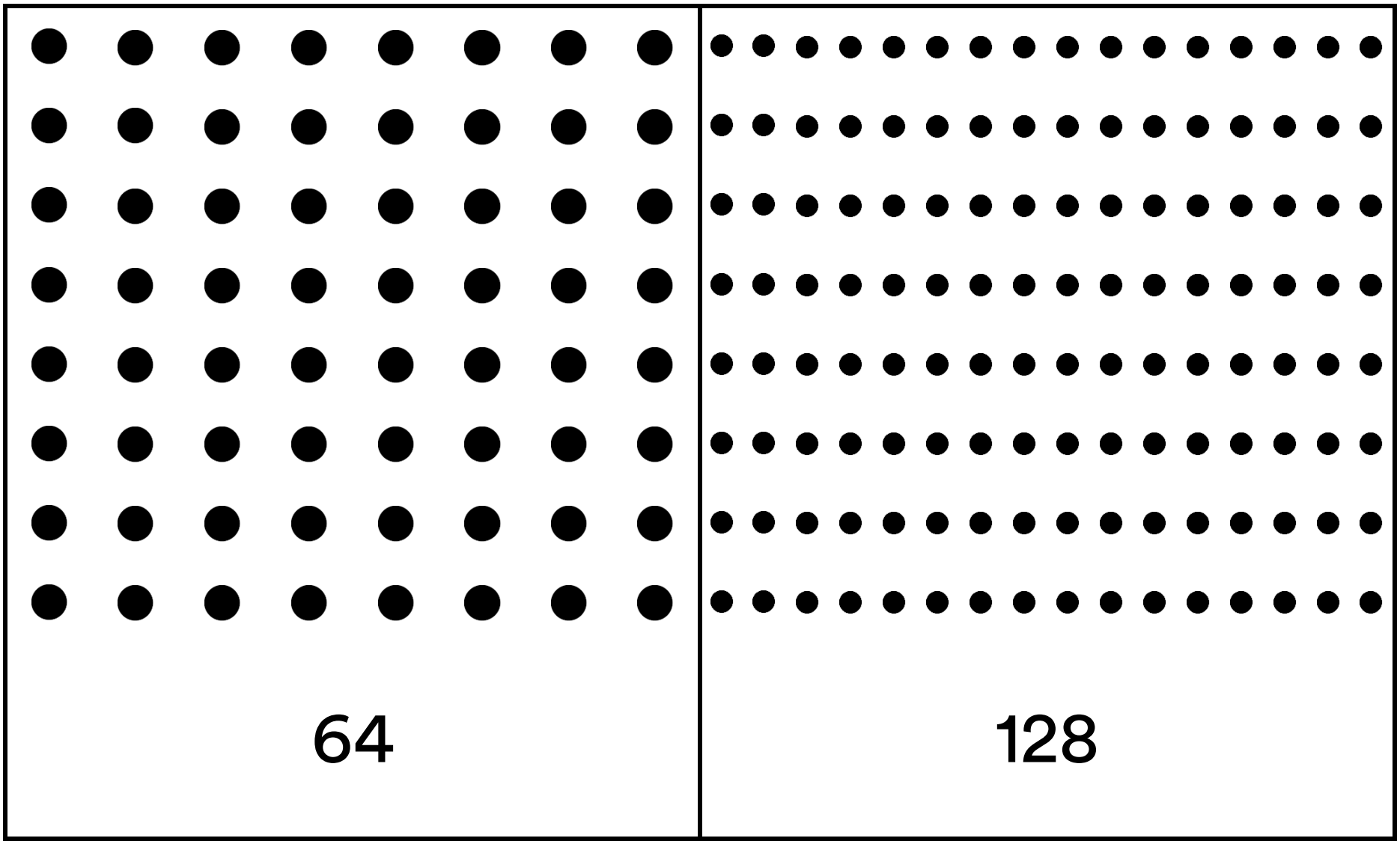
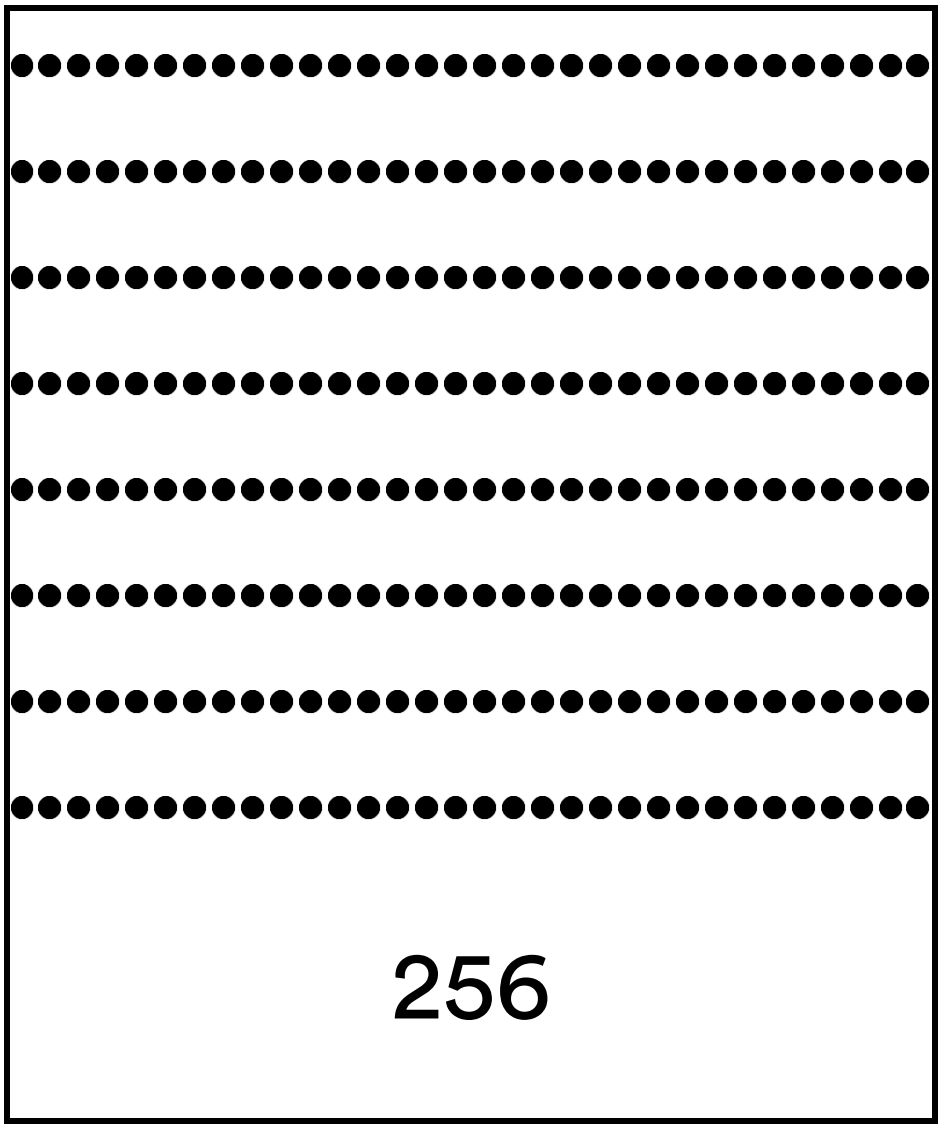
8


16
32


64
128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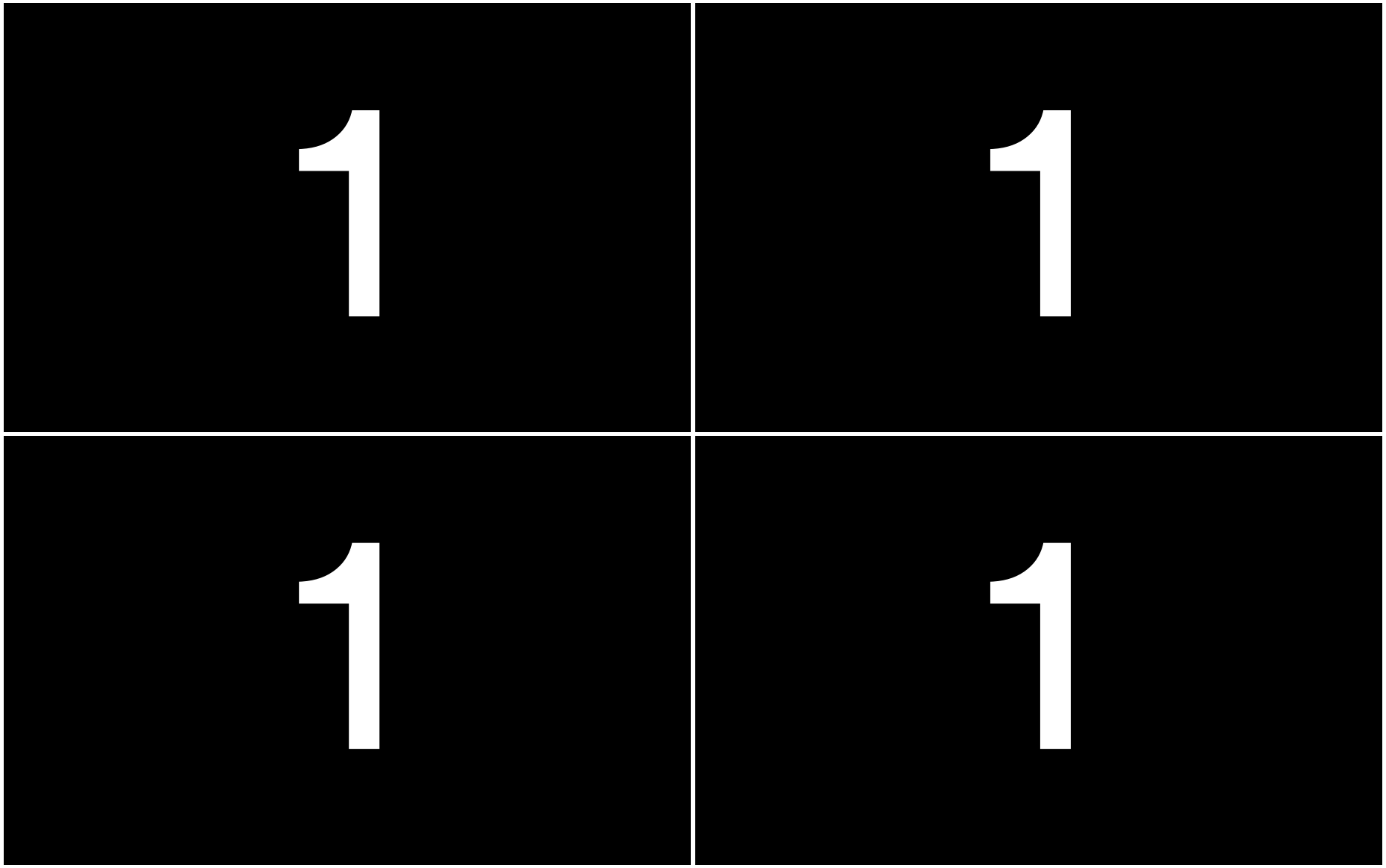
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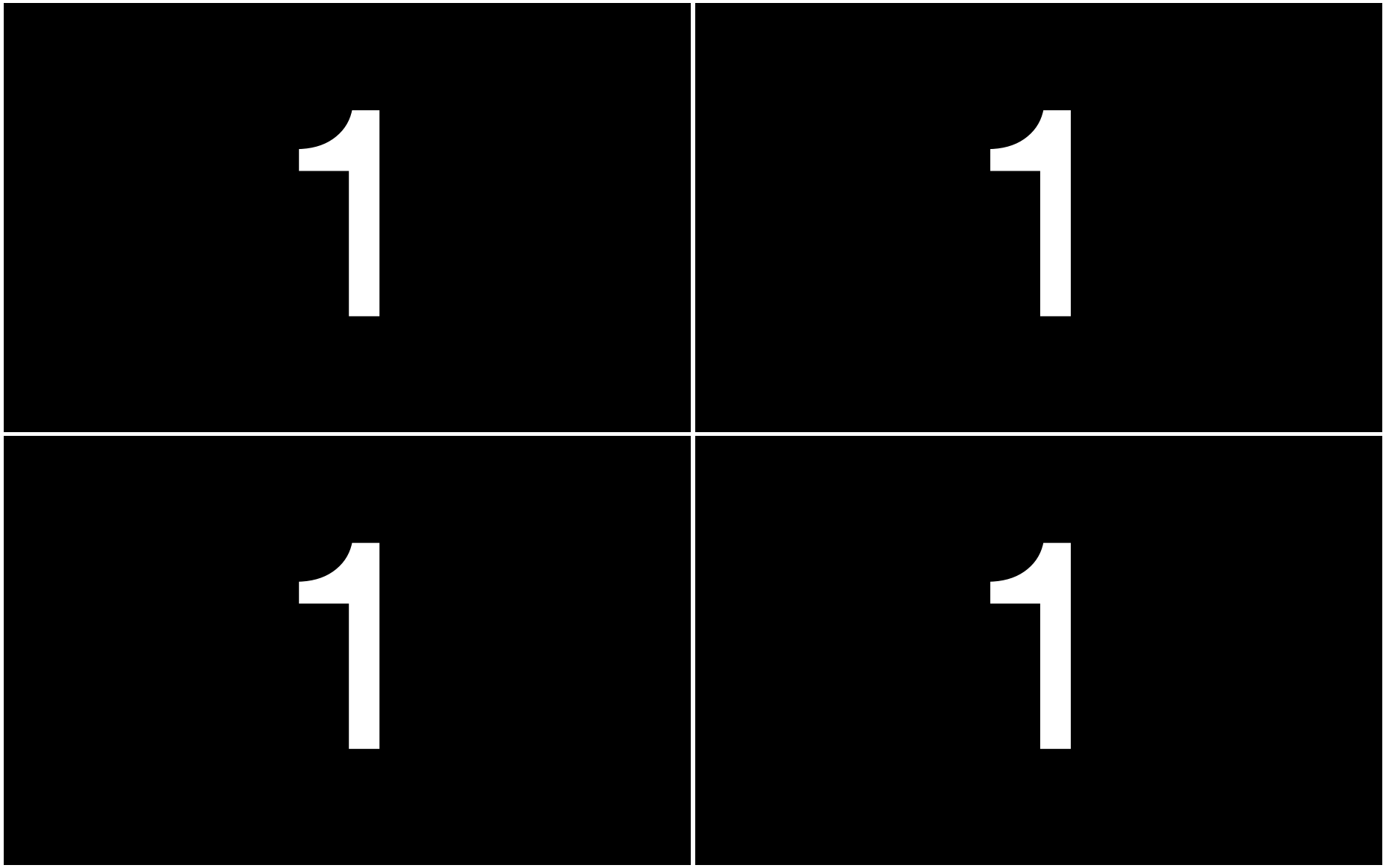
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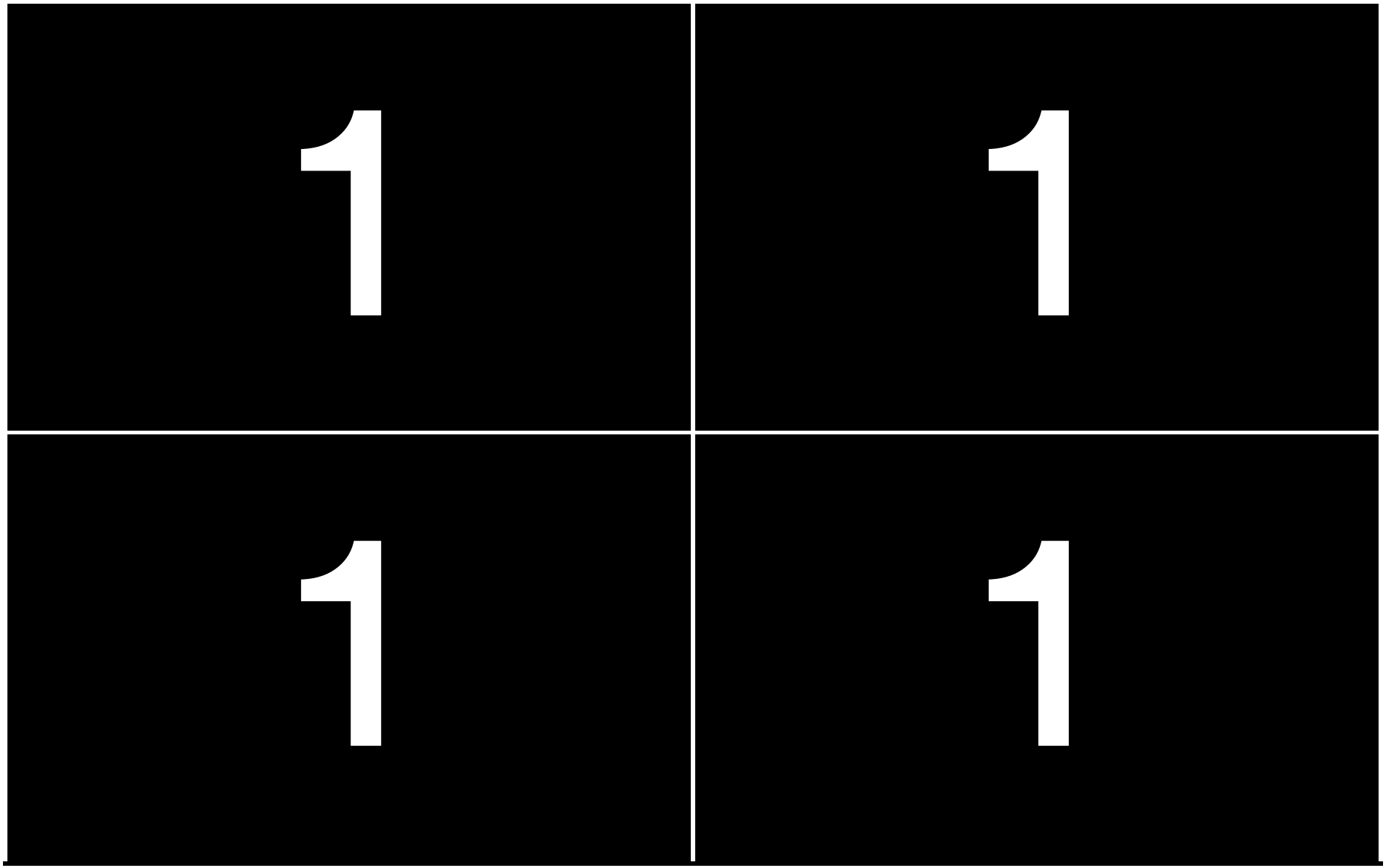
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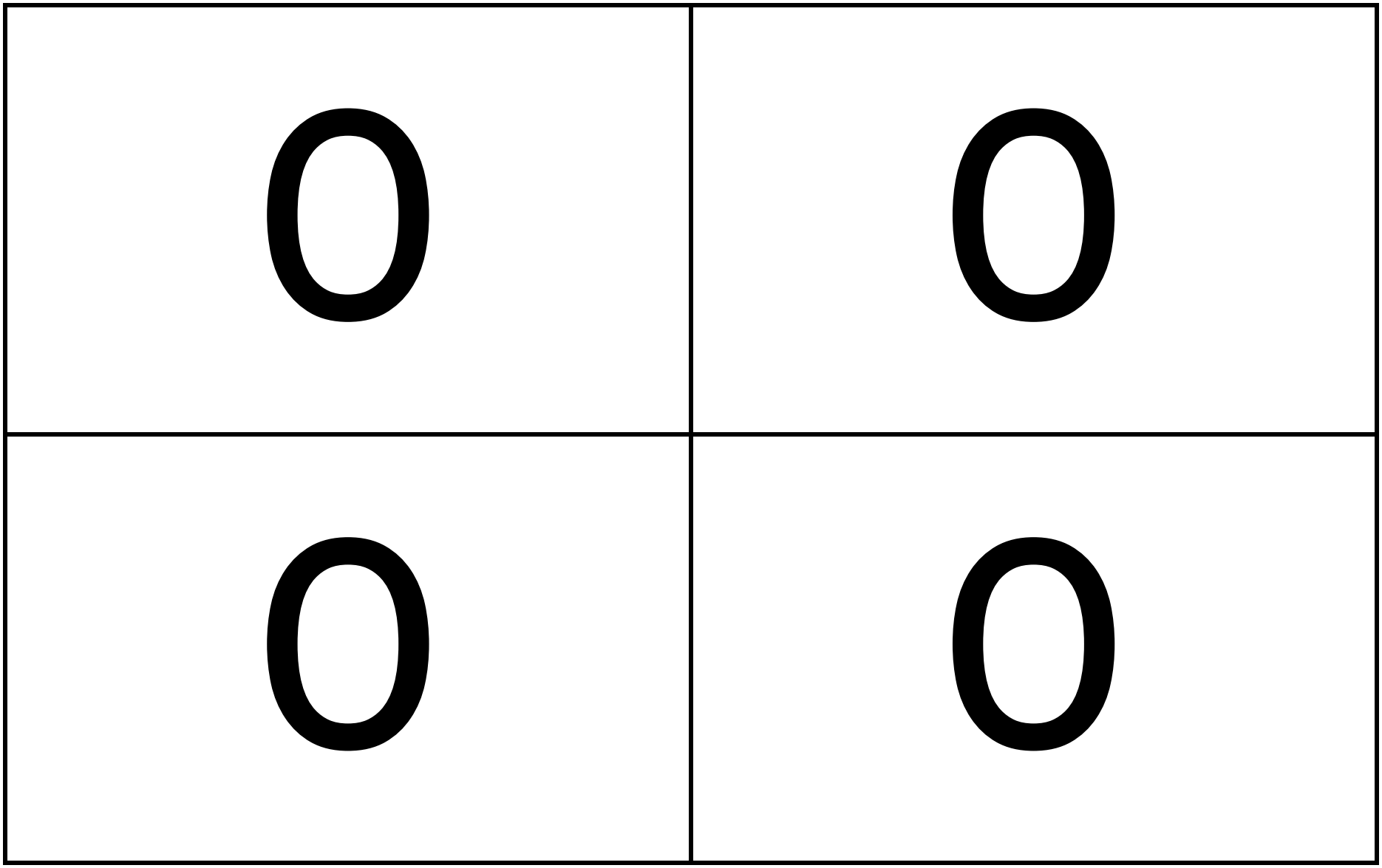
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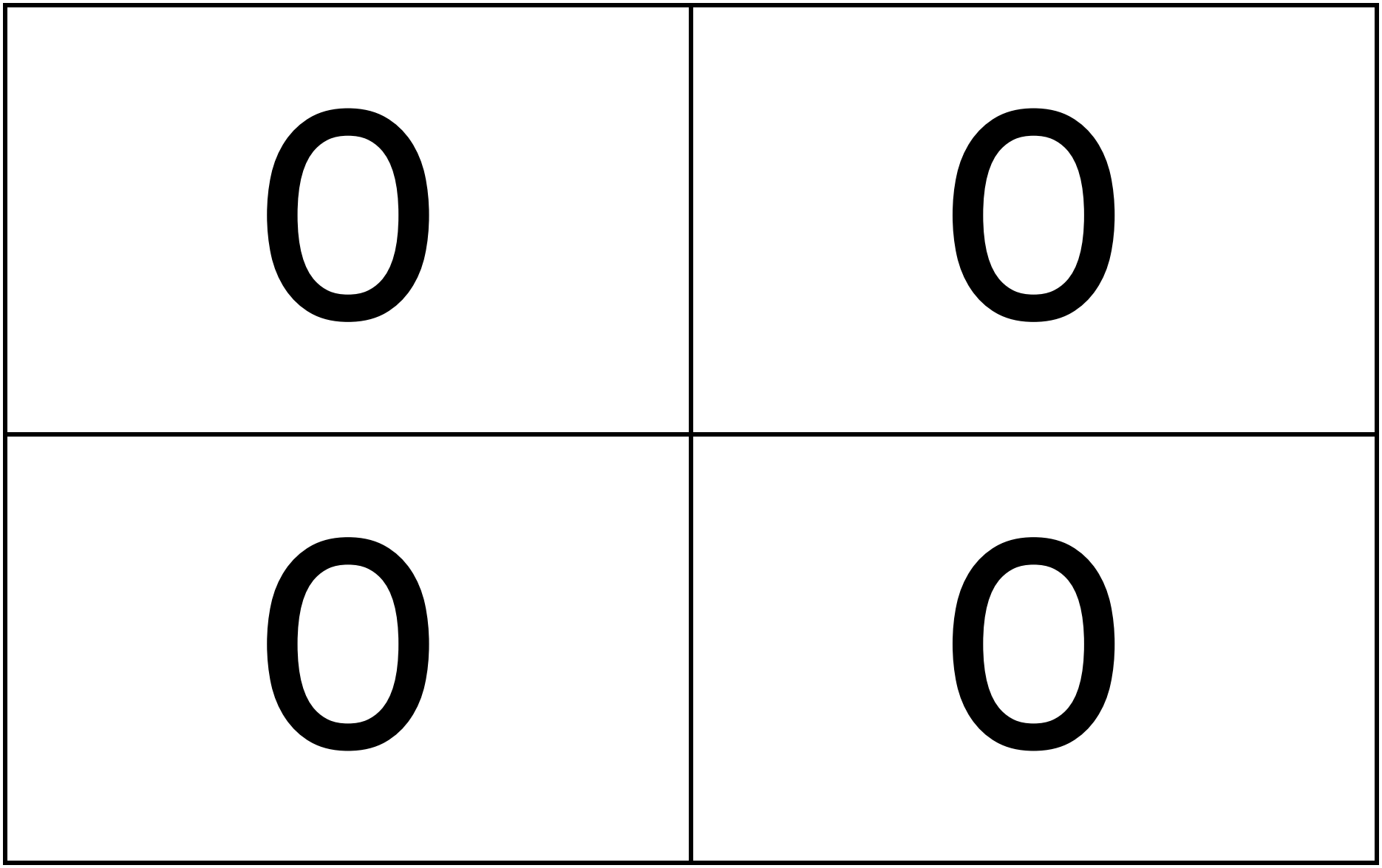
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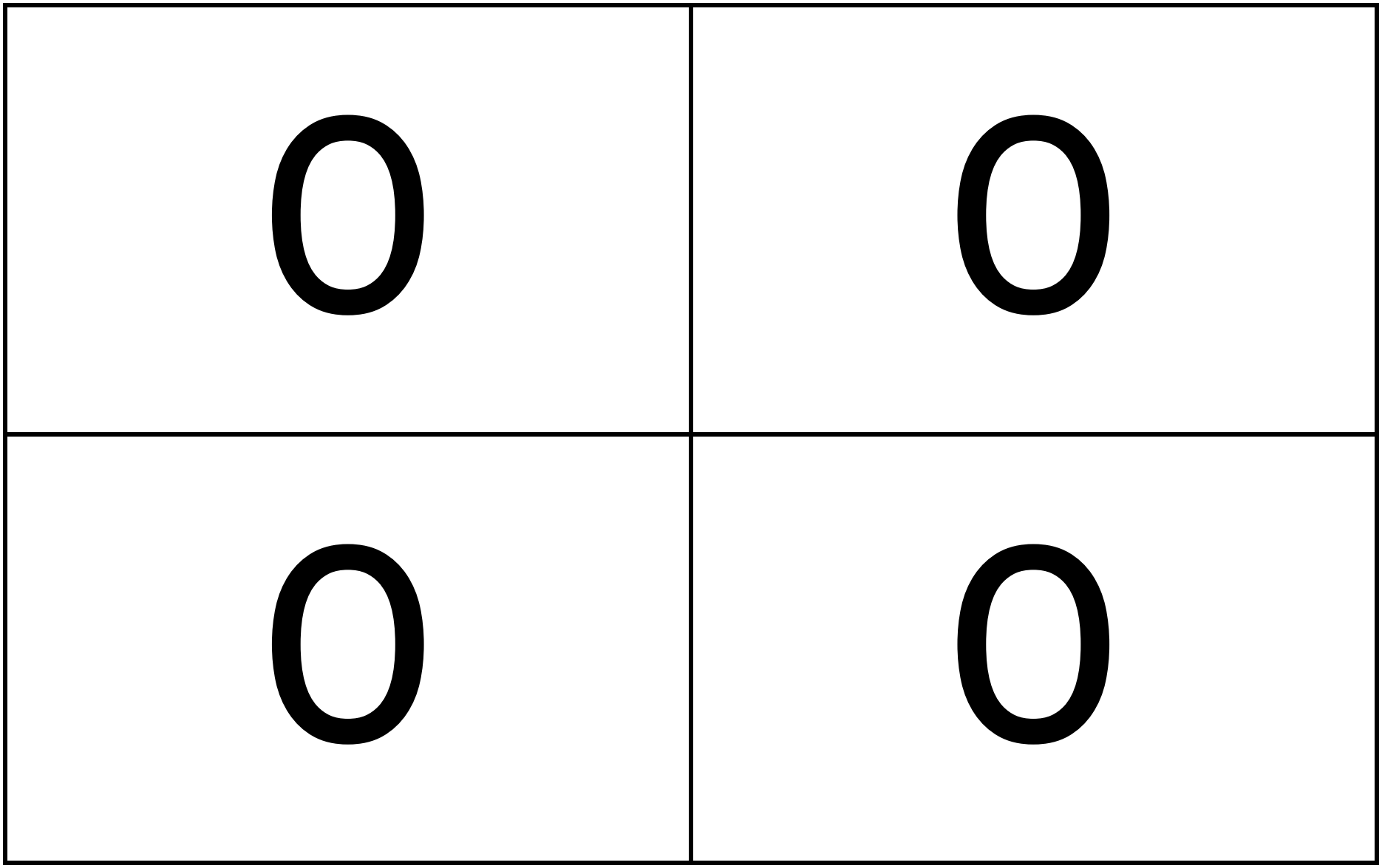
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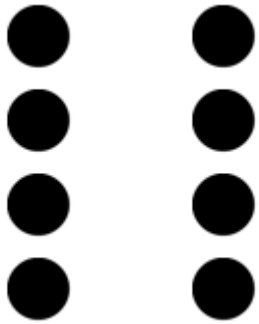
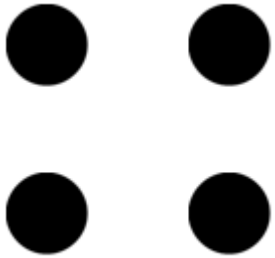
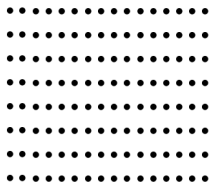
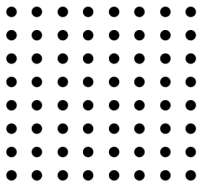
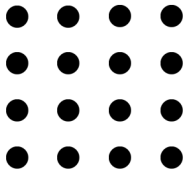
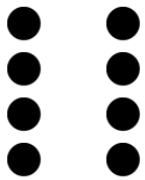
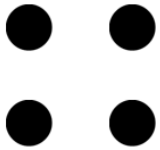
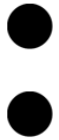
 8	 4	 2	 1

							
128	64	32	16	8	4	2	1

Computer Storage

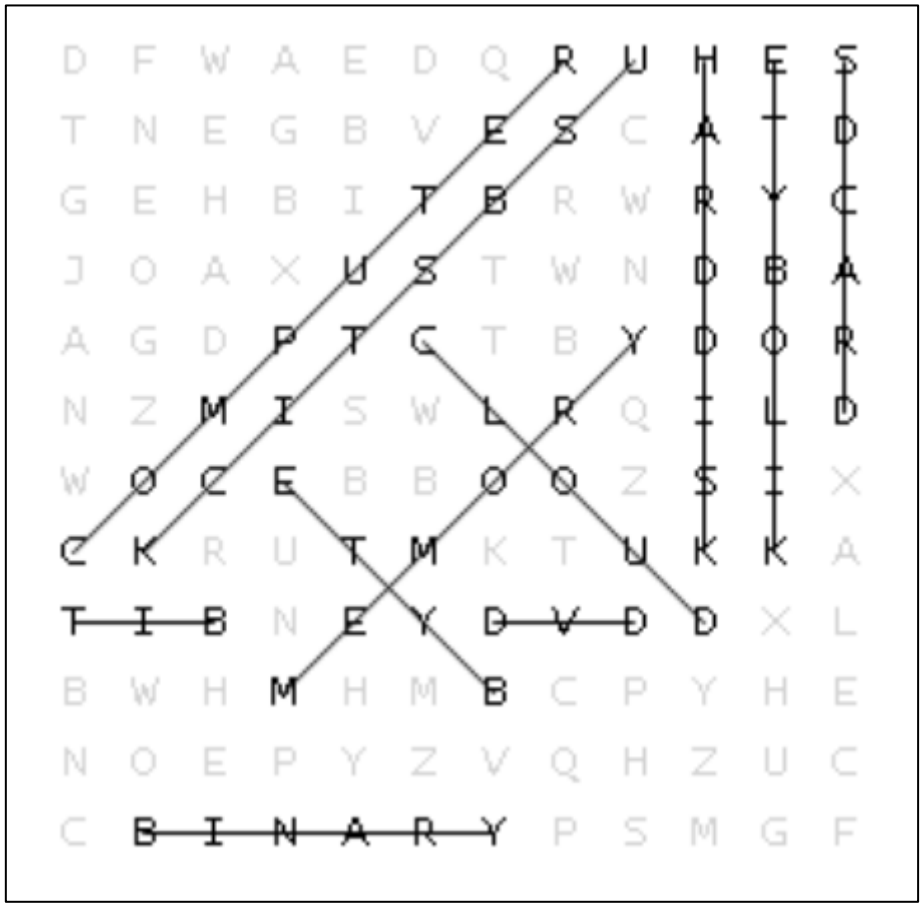
Word search

binary
bit
byte
cloud
computer
DVD
harddisk
kilobyte
memory
SDcard
USBstick

Find the word in the puzzle.

Words can go in any direction.
Words can share letters as they cross over each other.

Word search ANSWERS



Computer Storage

Anagrams

These words have been mixed up. Can you unscramble?

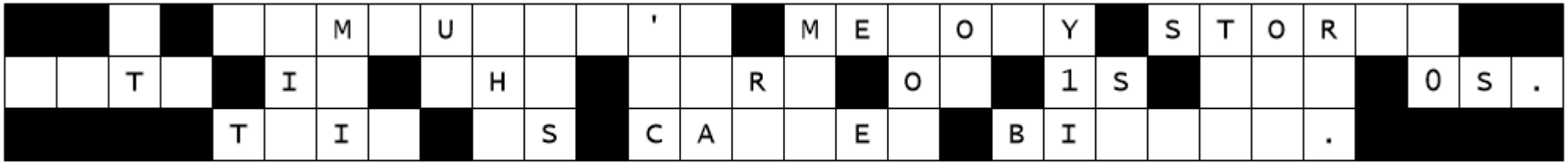
tokilbey _____	meuos _____	tbi _____	eskeapr _____
cdluo _____	bkedayor _____	prinert _____	rnesec _____
heeasohpdn _____	ianryb _____	estyb _____	

Anagrams ANSWERS

tokilbey kilobyte	meuos mouse	tbi bit	eskeapr speaker
cdluo cloud	bkedayor keyboard	prinert printer	rnesec screen
heeasohpdn headphones	ianryb binary	estyb bytes	

Computer Storage

Puzzle – Rebuild the sentence



O S I E O L M R Y

D A A A C H N P T T E R F S L M D F R N A A N D E S

Try to rebuild the message.

The letters from each cell are below the puzzle.
Try to rebuild the original message by choosing the letters for each cell.

ANSWER

		A		C	O	M	P	U	T	E	R	'	S		M	E	M	O	R	Y		S	T	O	R	E	S		
D	A	T	A		I	N		T	H	E		F	O	R	M		O	F		1	S		A	N	D		0	S	.
				T	H	I	S		I	S		C	A	L	L	E	D		B	I	N	A	R	Y	.				

O S I E O L M R Y

D A A A C H N P T T E R F S L M D F R N A A N D E S

Security Padlocks

Convert the following binary numbers to open the padlocks.

Padlock	Binary number	Padlock number
	First two numbers 10101 Last two numbers 01111	
	First two numbers 11001 Last two numbers 01110	

Security Padlocks

	First two numbers 11110 Last two numbers 10010	
	First two numbers 01011 Third number 01001 Fourth number 00111	

Security Padlocks

ANSWERS

Padlock	Binary number	Padlock number
	First two numbers 10101 Last two numbers 01111	Answer 2 1 1 5
	First two numbers 11001 Last two numbers 01110	Answer 2 5 1 4
	First two numbers 11110 Last two numbers 10010	Answer 3 0 1 8
	First two numbers 01011 Third number 01001 Fourth number 00111	Answer 1 1 9 7

Password Bingo

Write/arrange 9 of these statements randomly in the blank boxes of your Bingo board.

Use passwords to protect your data. ☑	12345678 ☒	862FKP£ab! ☑
Not easily guessed. ☑	applepear23 ☒	Change it regularly. ☑
Do not write it down. ☑	Do not tell anyone ☑	Have different passwords for different devices. ☑
sarahbloggs2 ☒	Does not contain personal information like name ☑	Does not contain memorable keyboard strokes. ☑
Combines numbers, lowercase, uppercase and symbols. ☑	Should be a10 or more characters long. ☑	12QWERTYUIP{ ☒

The teacher will call out the statements randomly one by one slowly, and you will need to 'mark' them on your Bingo board using a counter.

Shout BINGO when you get three in a horizontal row.

Bingo board
