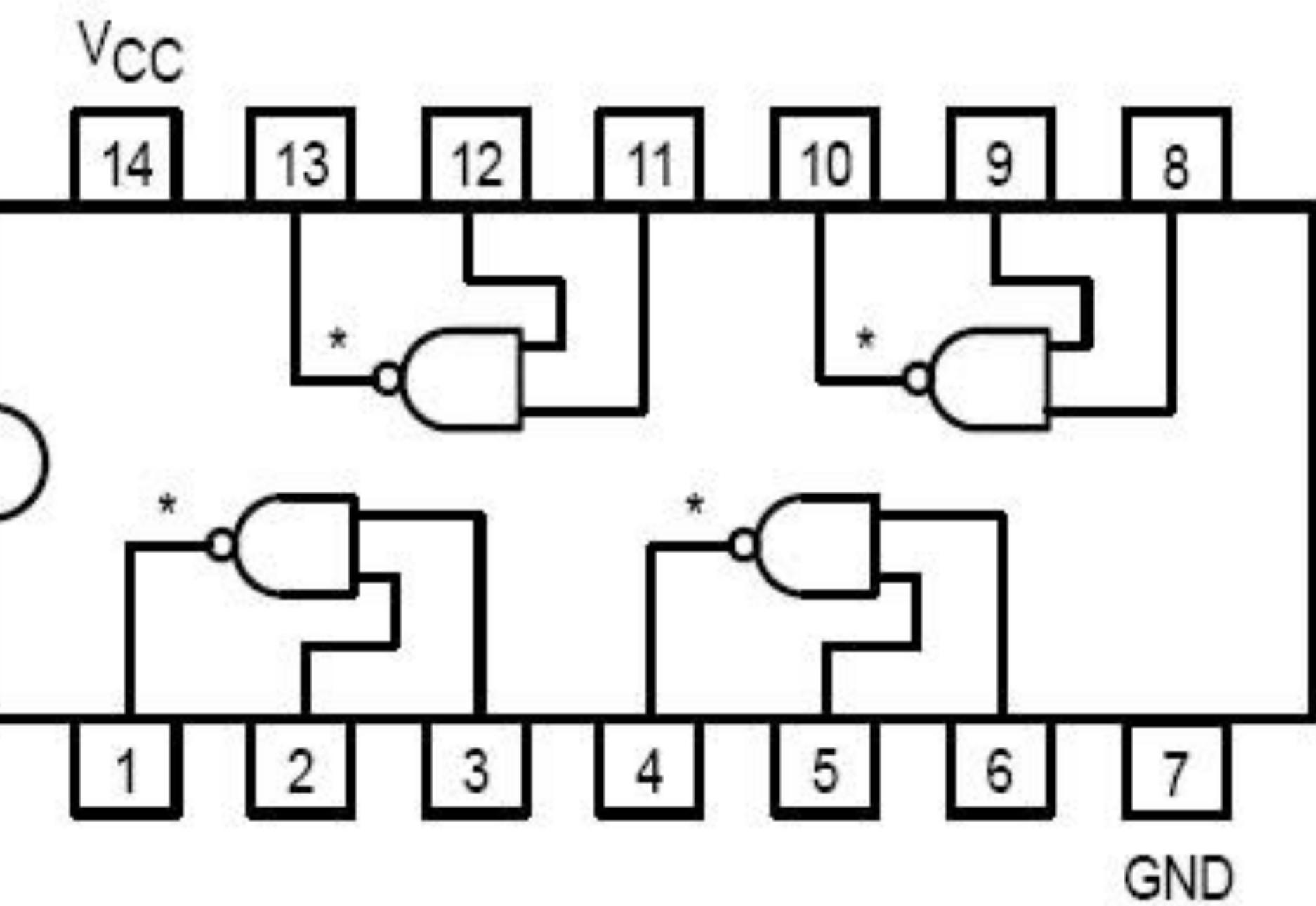
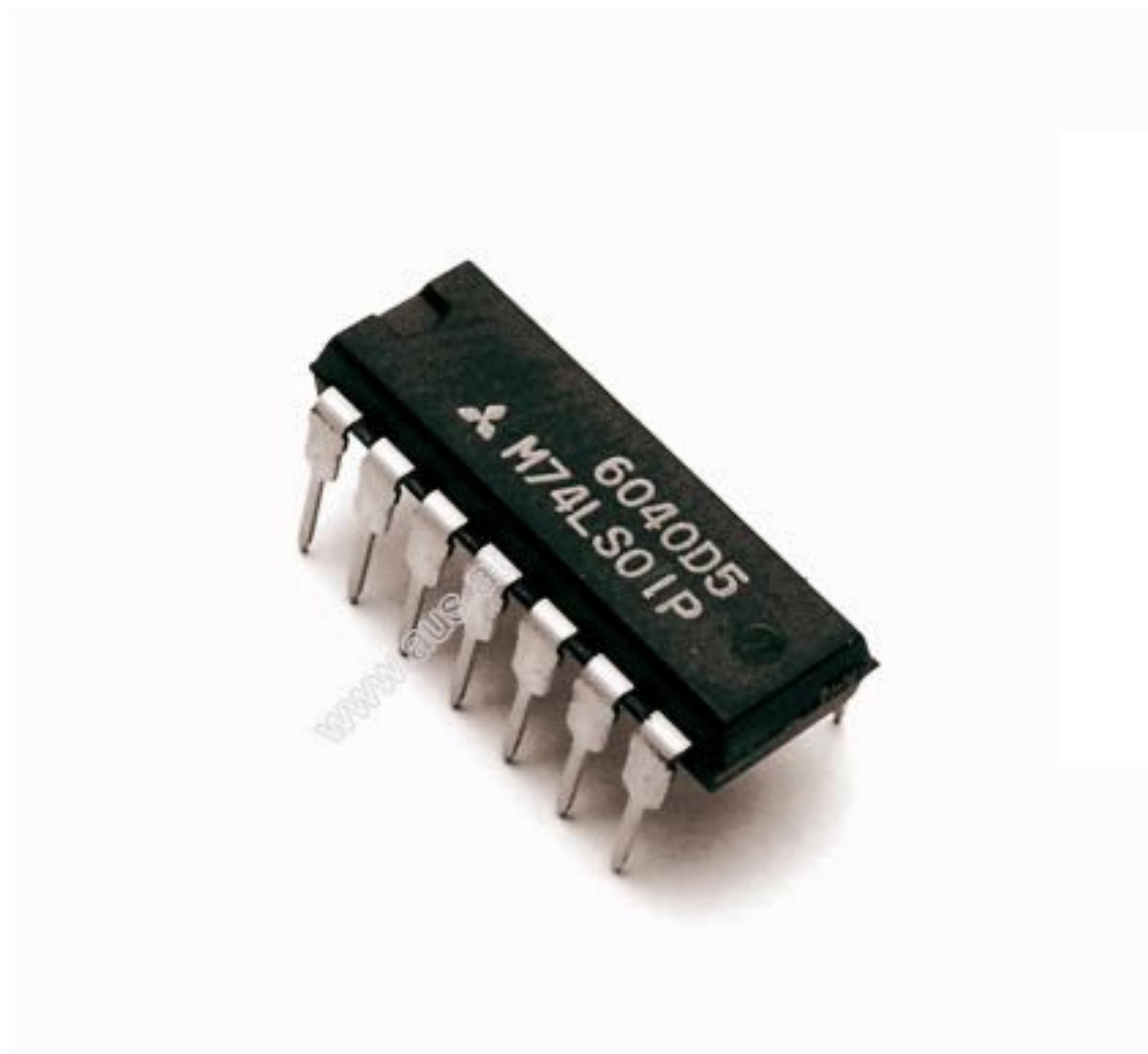


Electro workshop

Ing. Gabriel Války, PhD.

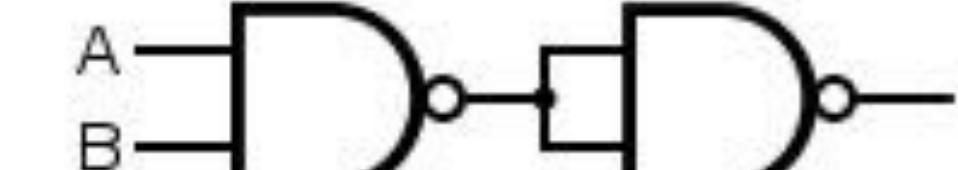
<https://x.valky.eu/elec5a>



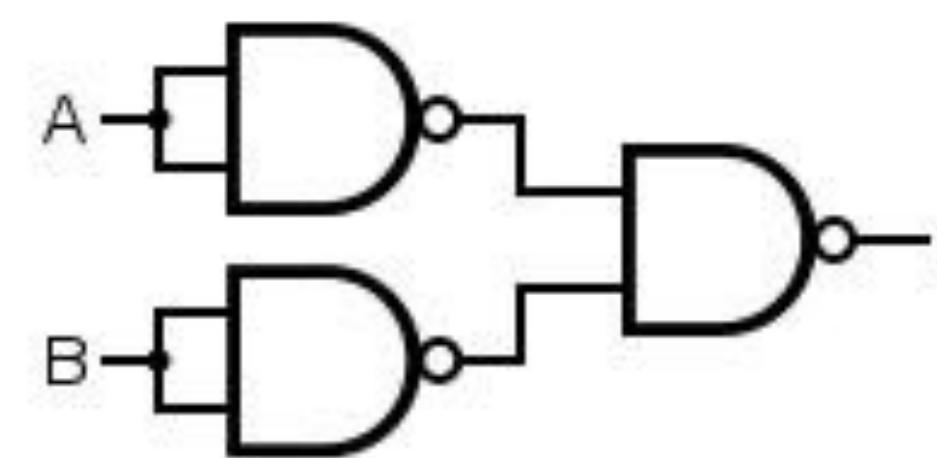
NOT



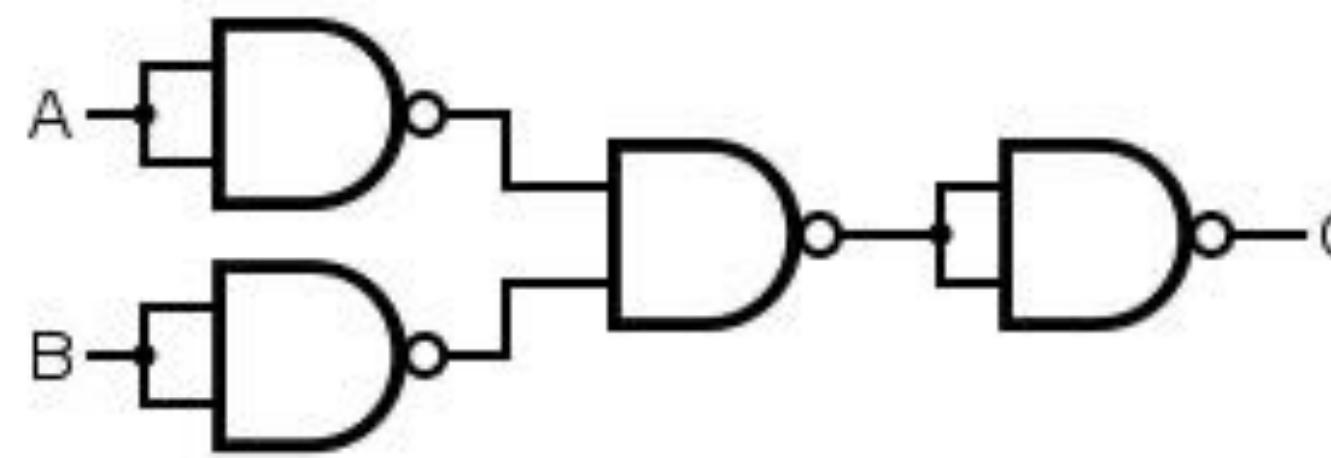
AND



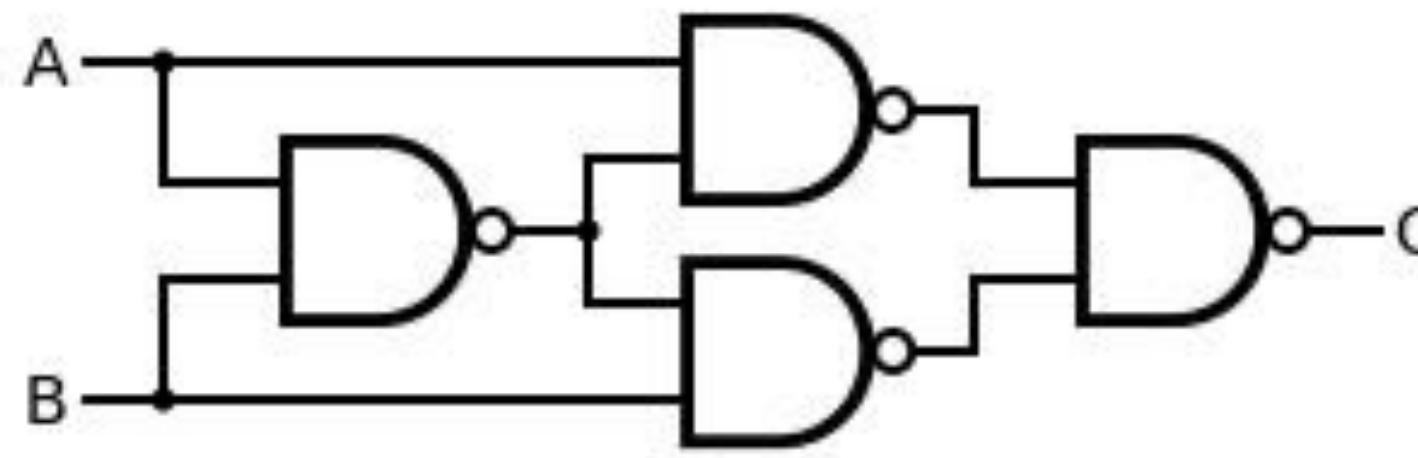
OR



NOR

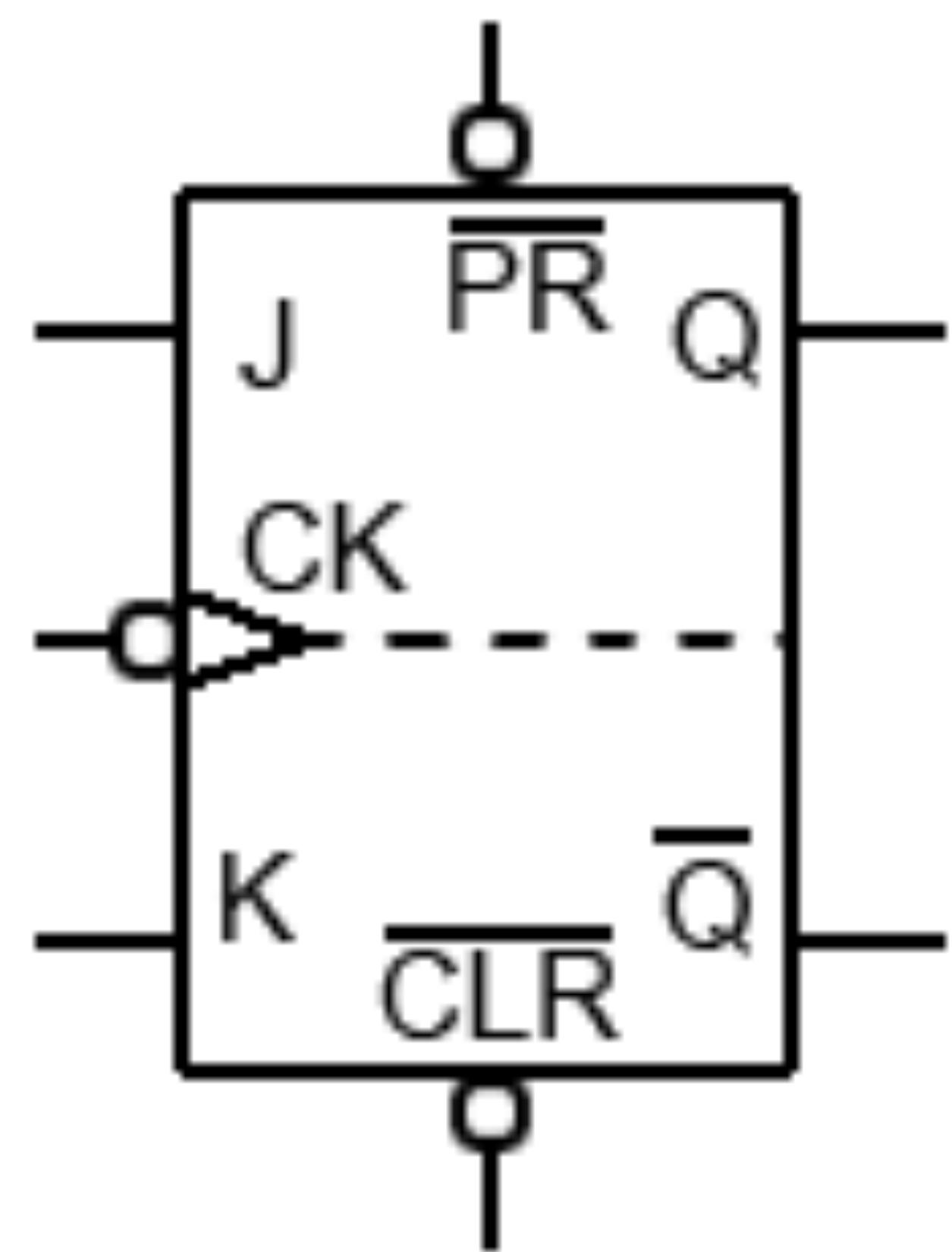
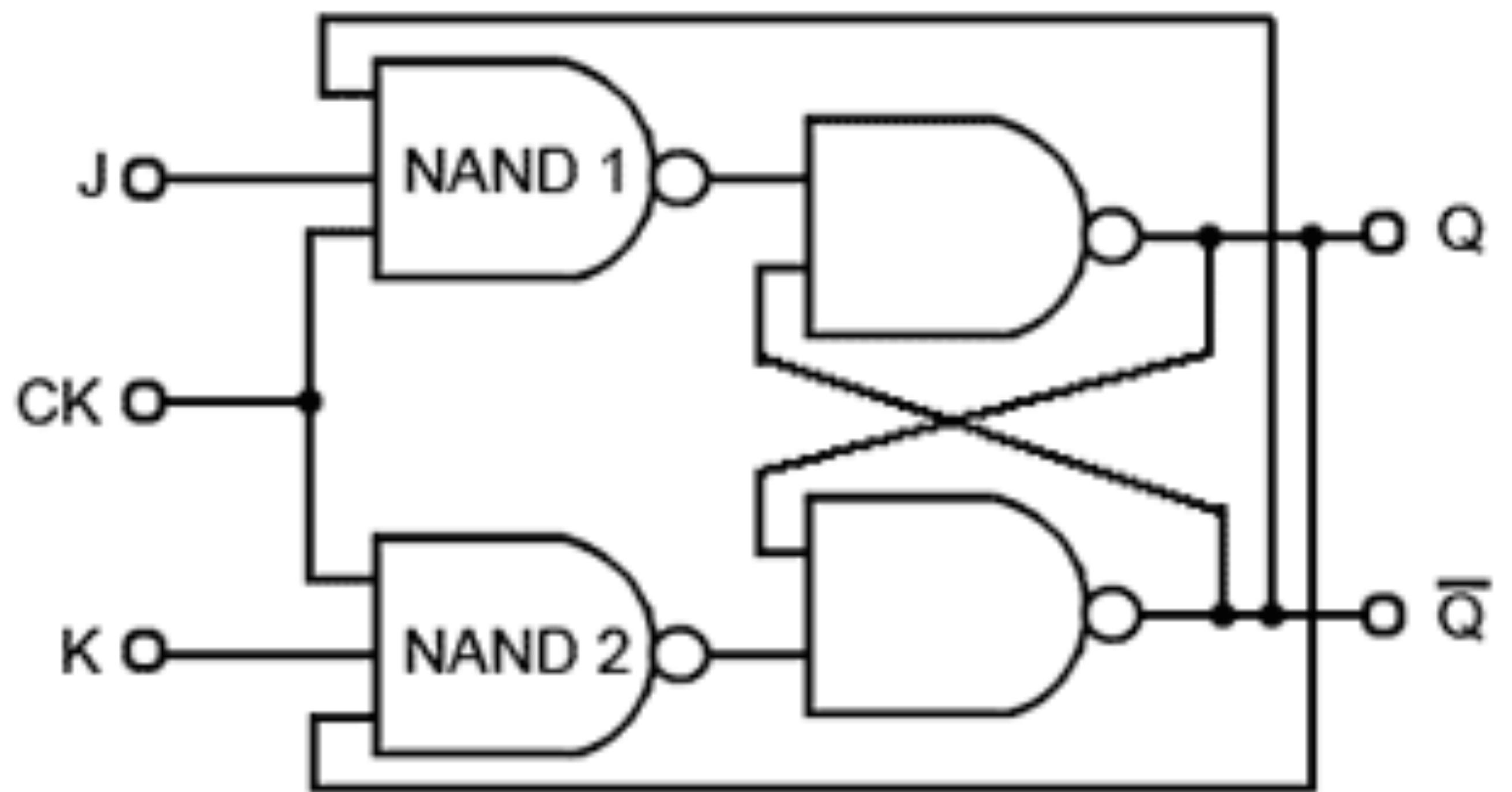


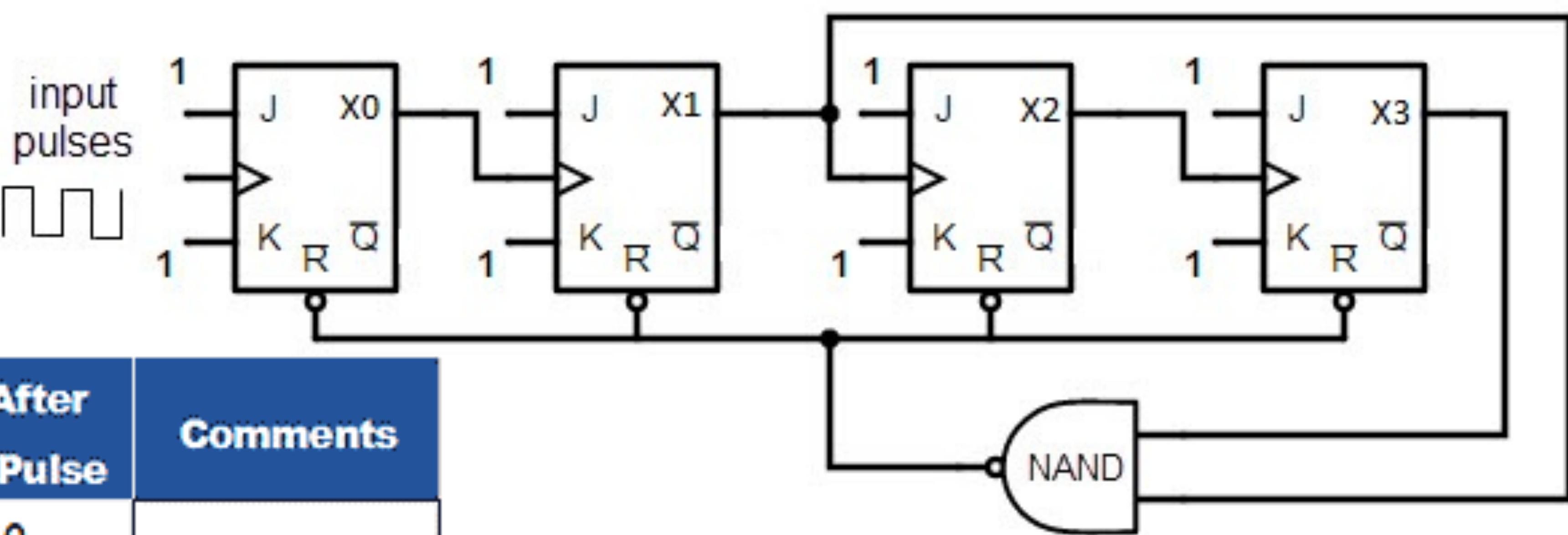
XOR



Symbol	Truth Table		
2-input NAND Gate	A	B	Q
	0	0	1
	0	1	1
	1	0	1
	1	1	0

Boolean Expression Q = A NAND B

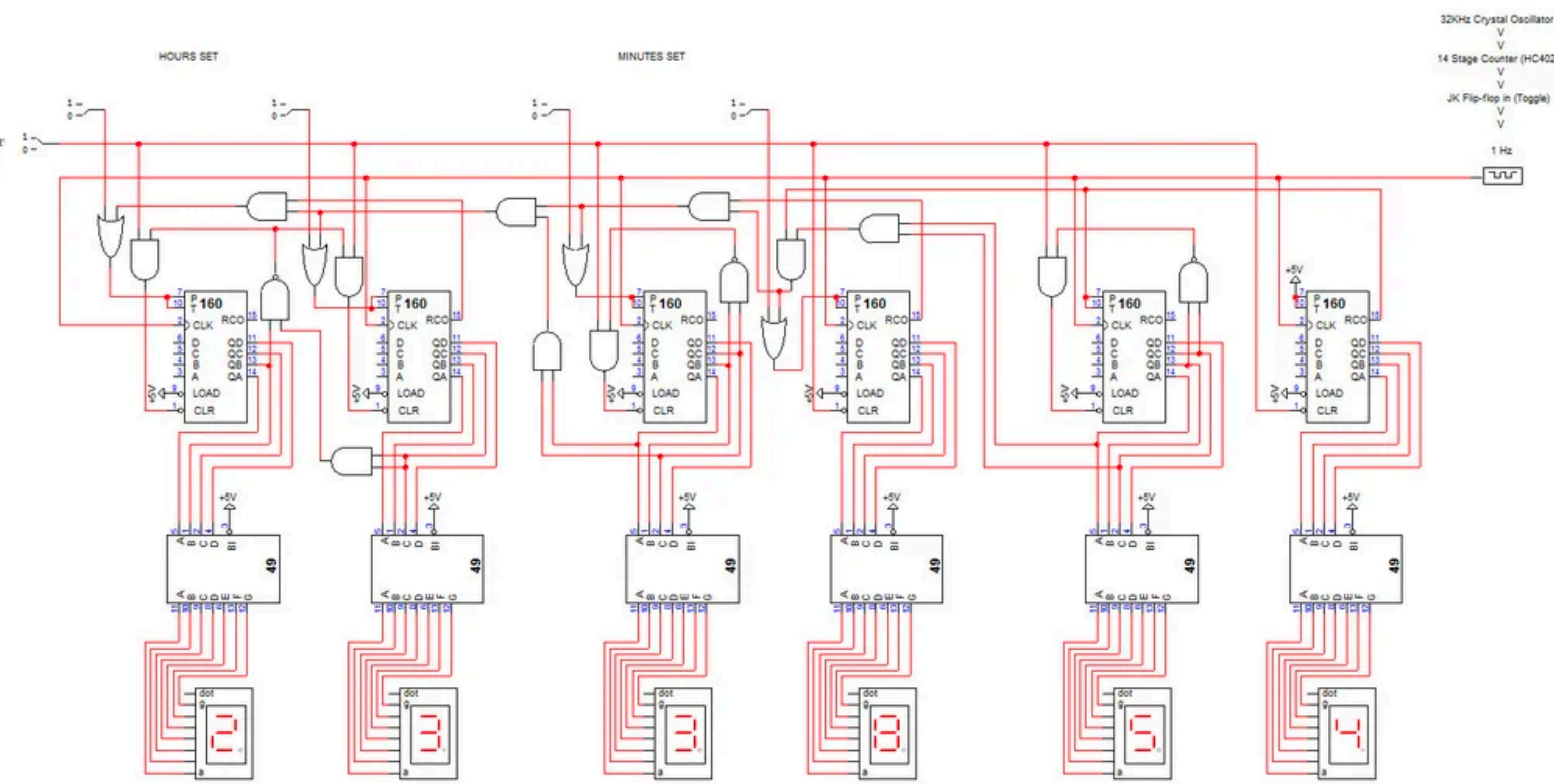




J	K	Q Before CK Pulse	Q After CK Pulse	Comments
0	0	0	0	No Change
0	0	1	1	
1	0	0	1	
1	0	1	1	$Q = J$
0	1	0	0	$\overline{Q} = K$
0	1	1	0	
1	1	0	1	Outputs Toggle
1	1	1	0	

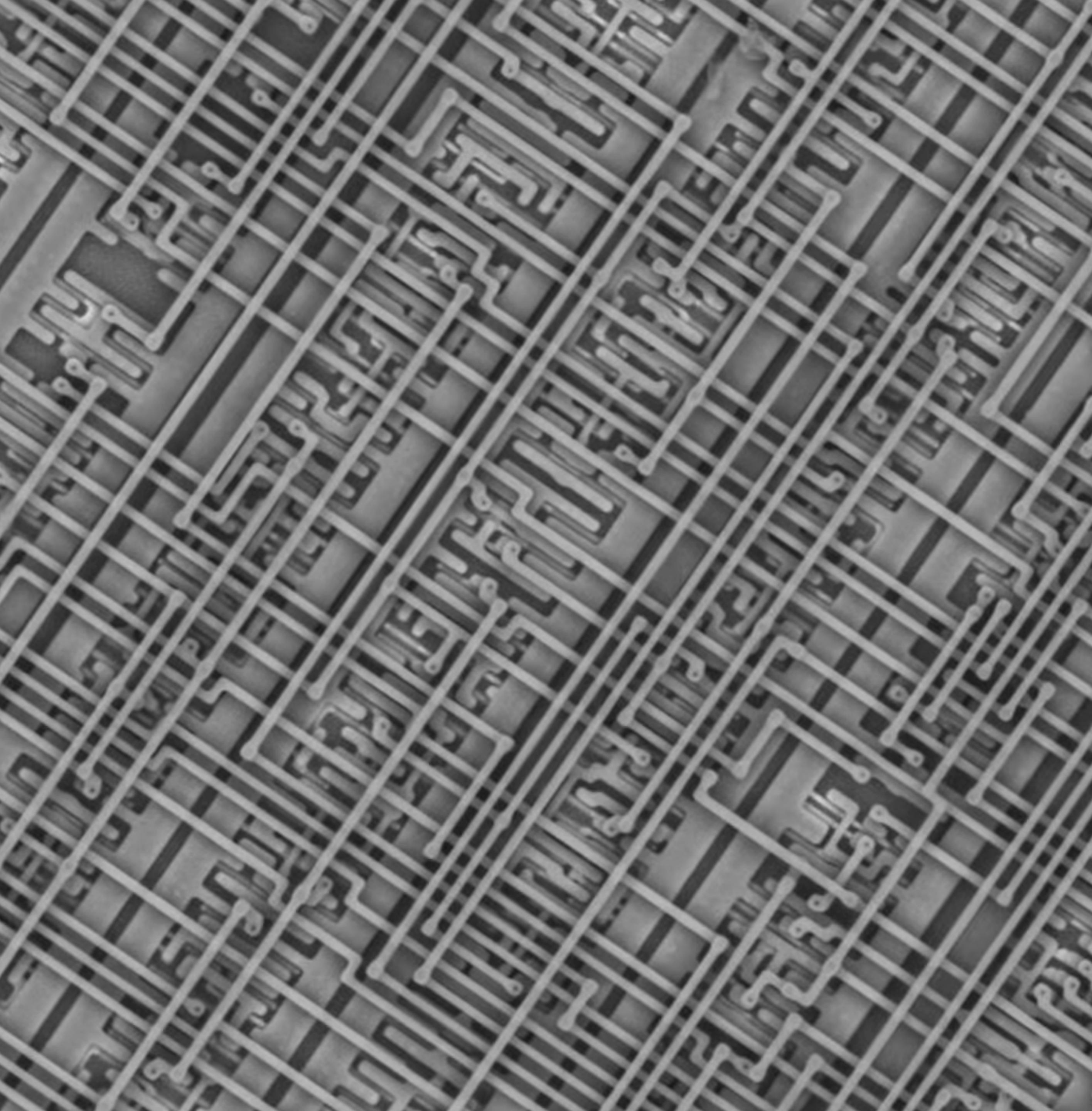
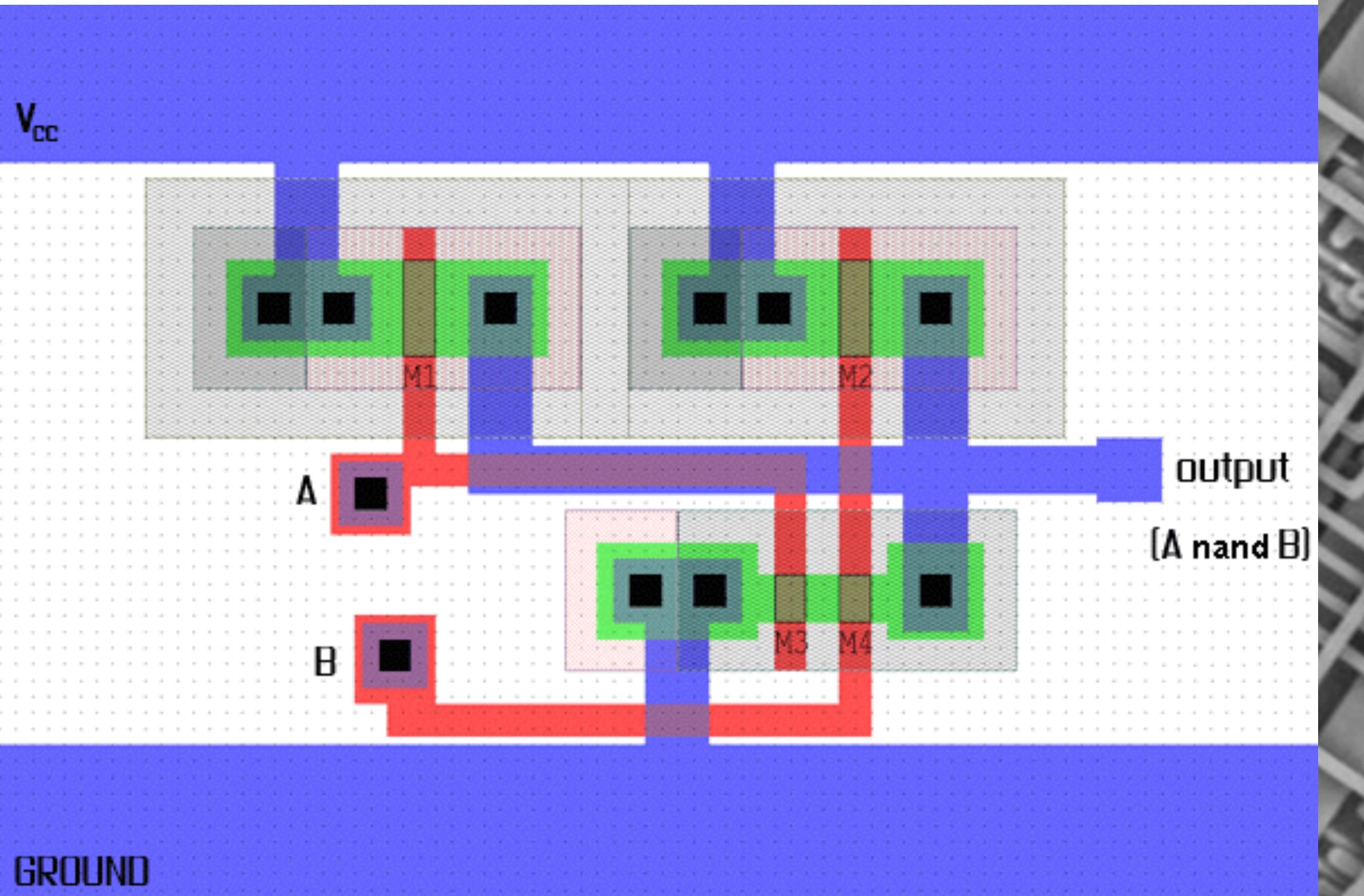
Binary	Decimal	Hexadecimal
0000	0	0
0001	1	1
0010	2	2
0011	3	3
0100	4	4
0101	5	5
0110	6	6
0111	7	7

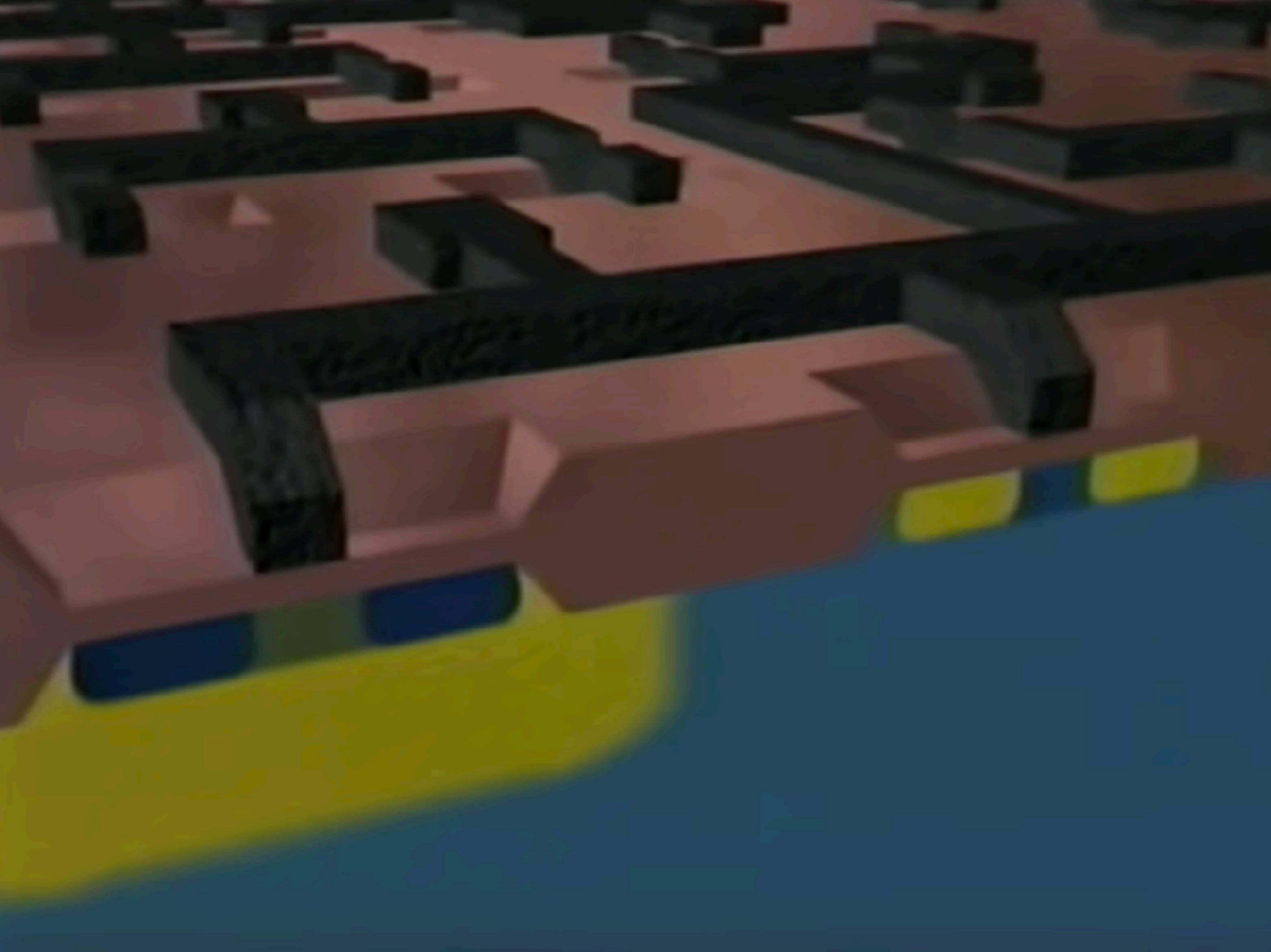
Binary	Decimal	Hexadecimal
1000	8	8
1001	9	9
1010	10	A
1011	11	B
1100	12	C
1101	13	D
1110	14	E
1111	15	F



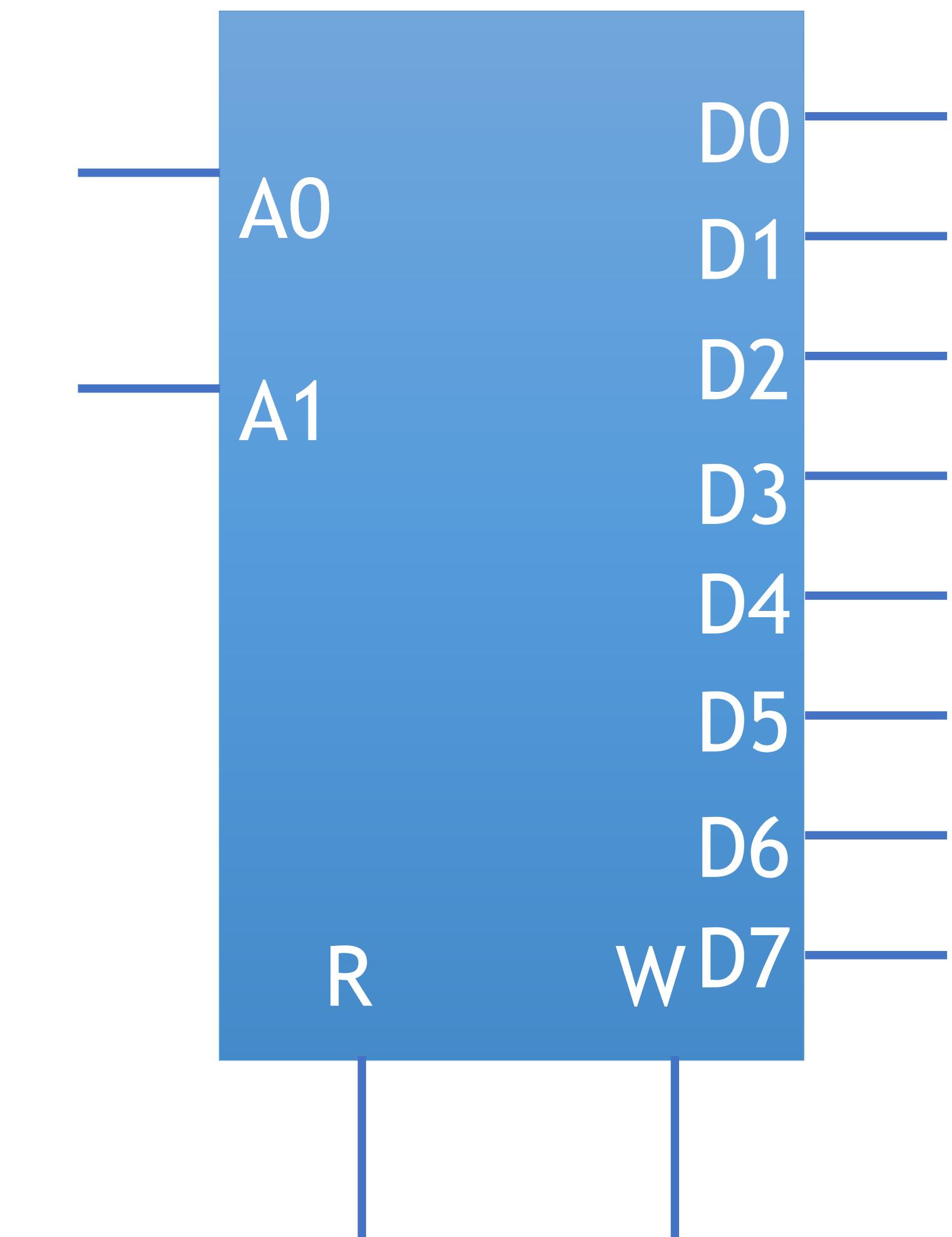
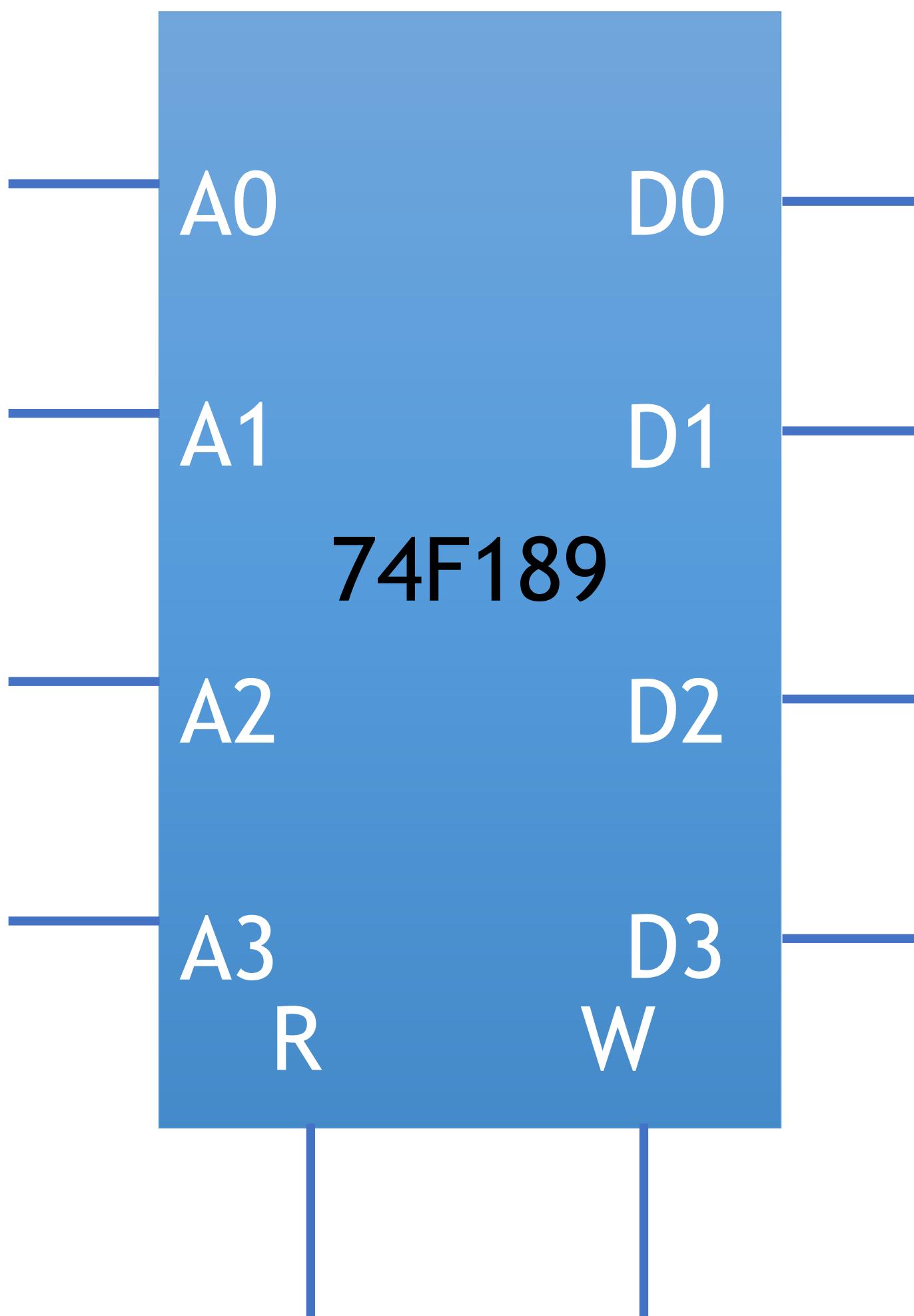
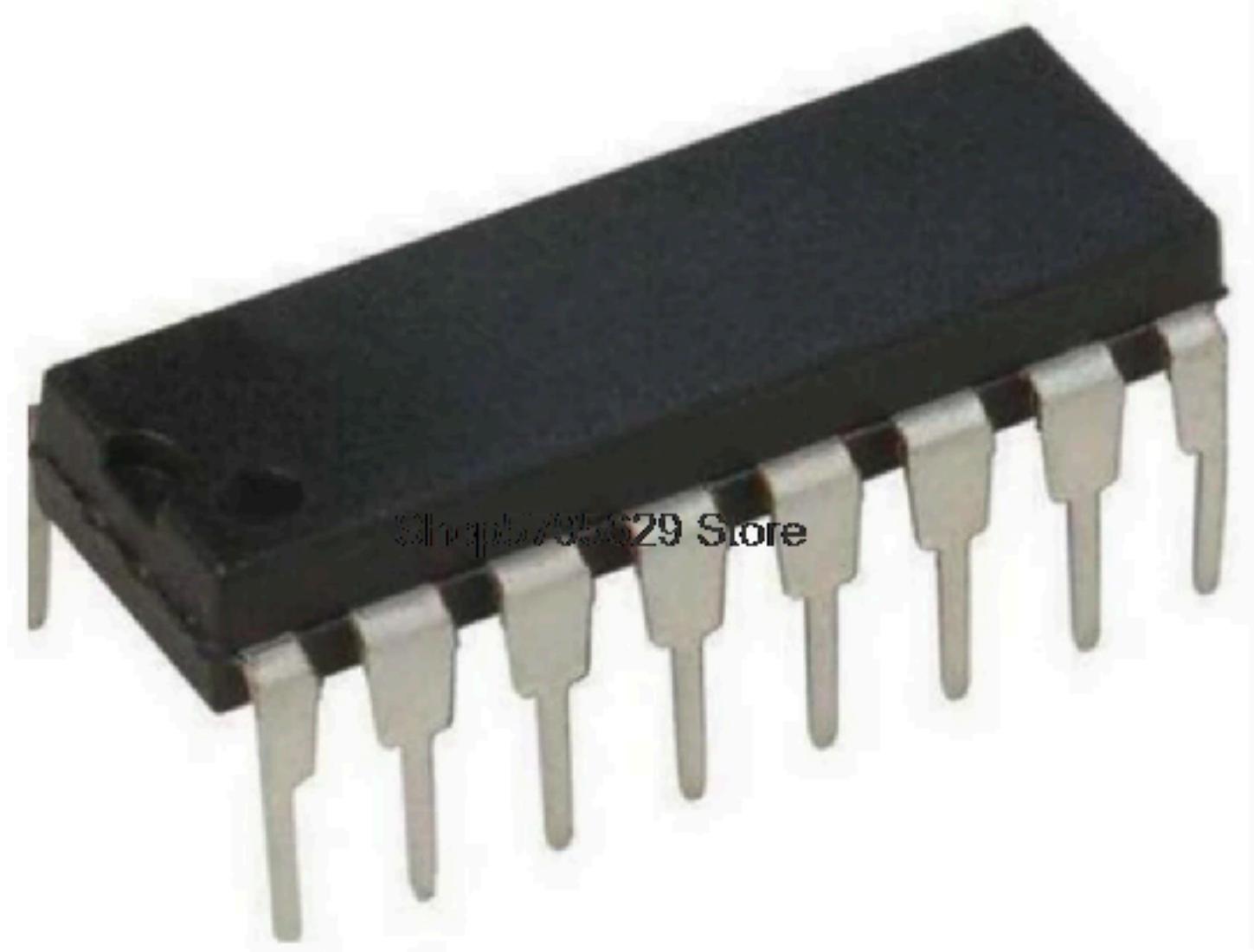
andrew.f.marshall@me.com

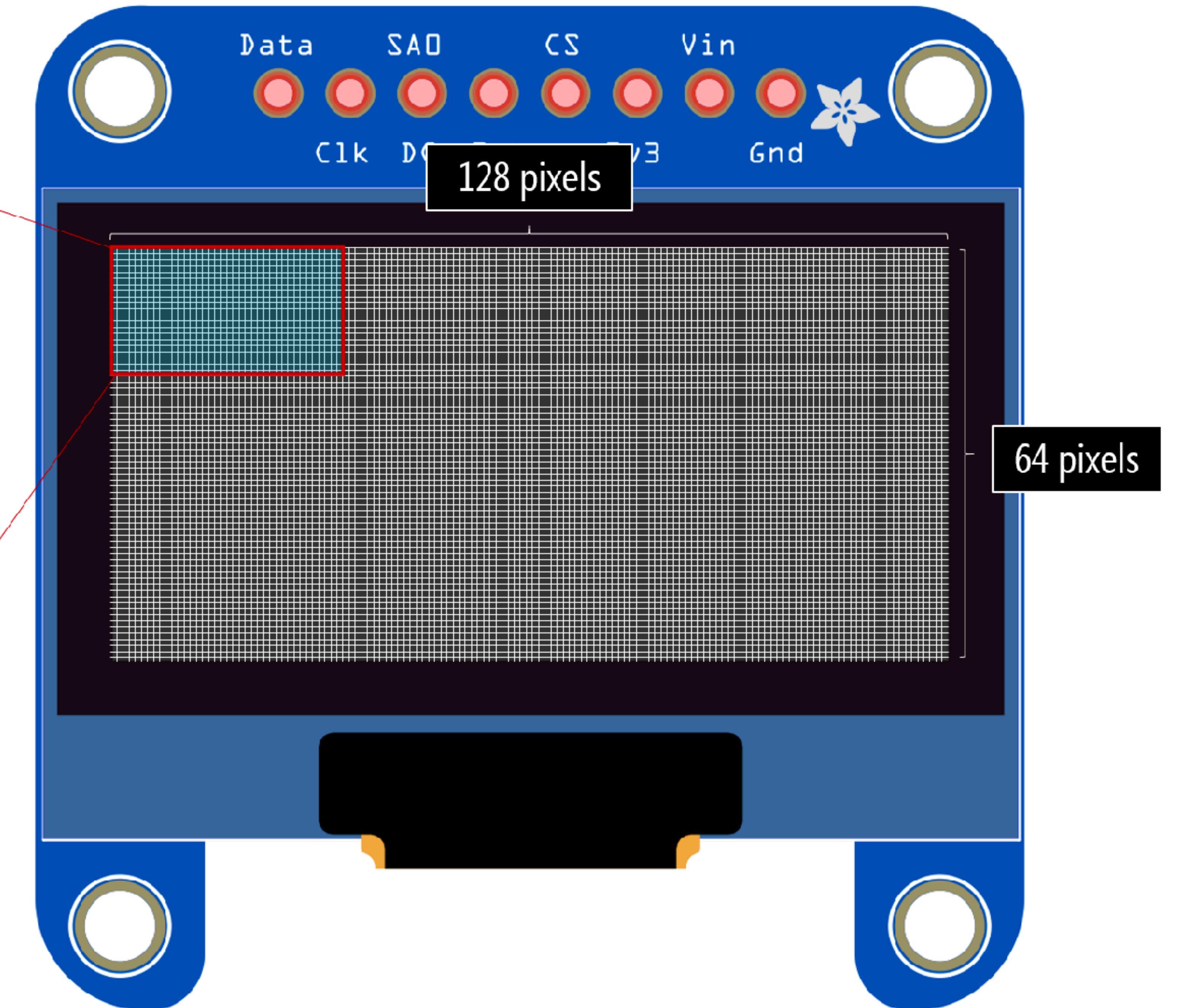
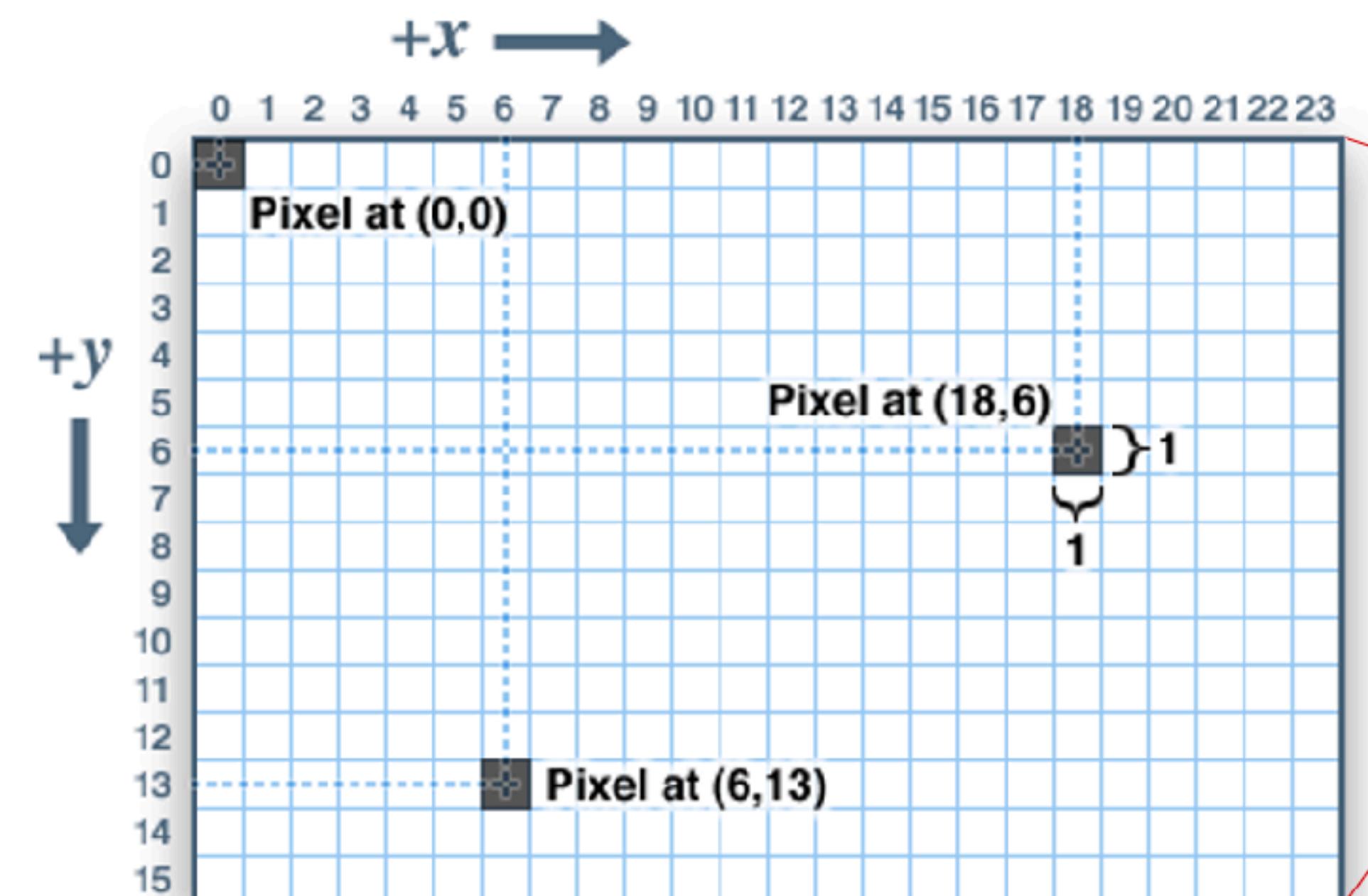




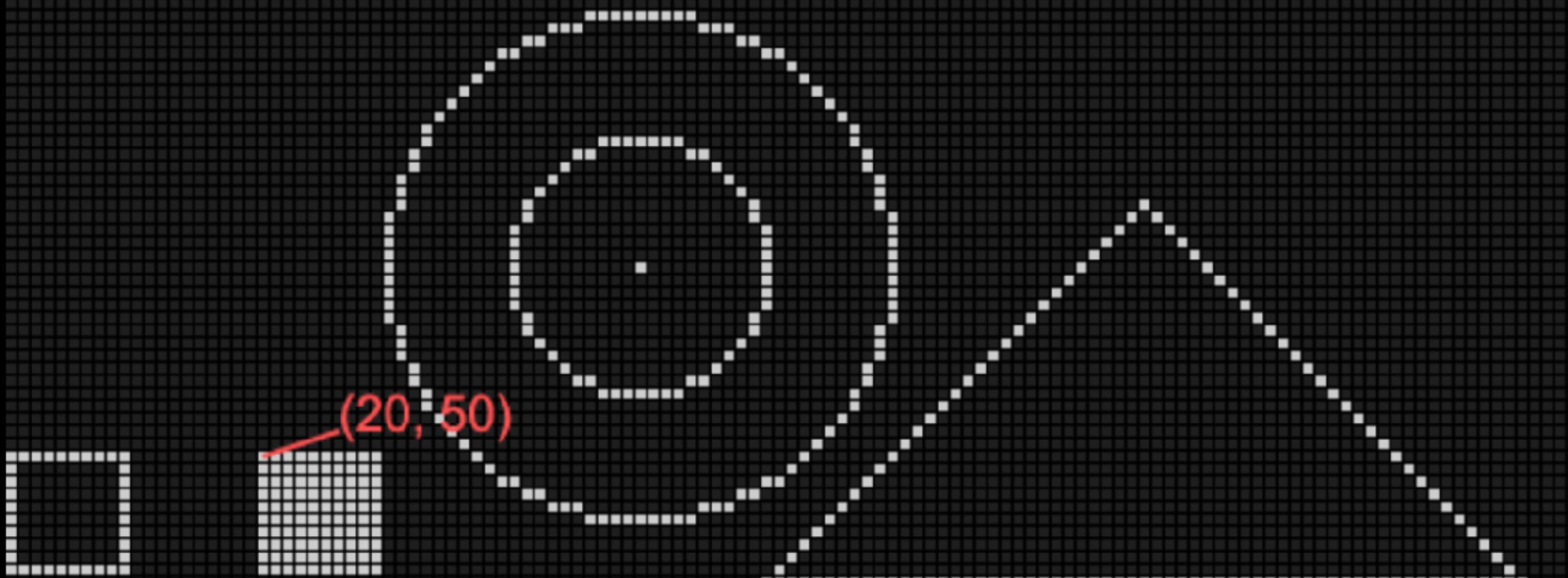


<https://youtu.be/2ciyXehUK-U?t=563>





Creative point 2021



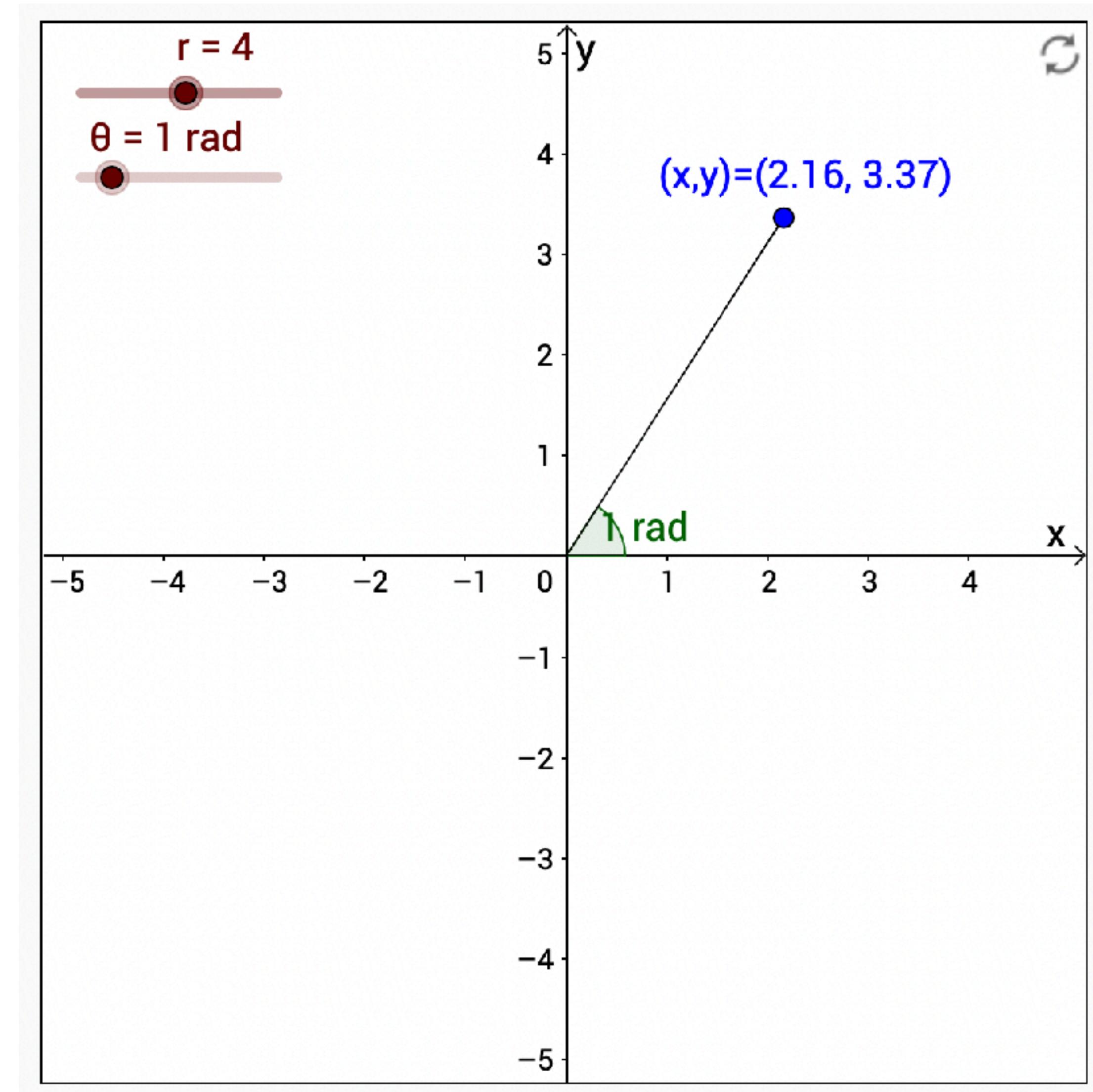
```
#include <Arduino.h>
#include <U8g2lib.h>
#include <Wire.h>

U8G2_SH1106_128X64_NONAME_F_HW_I2C u8g2(U8G2_R

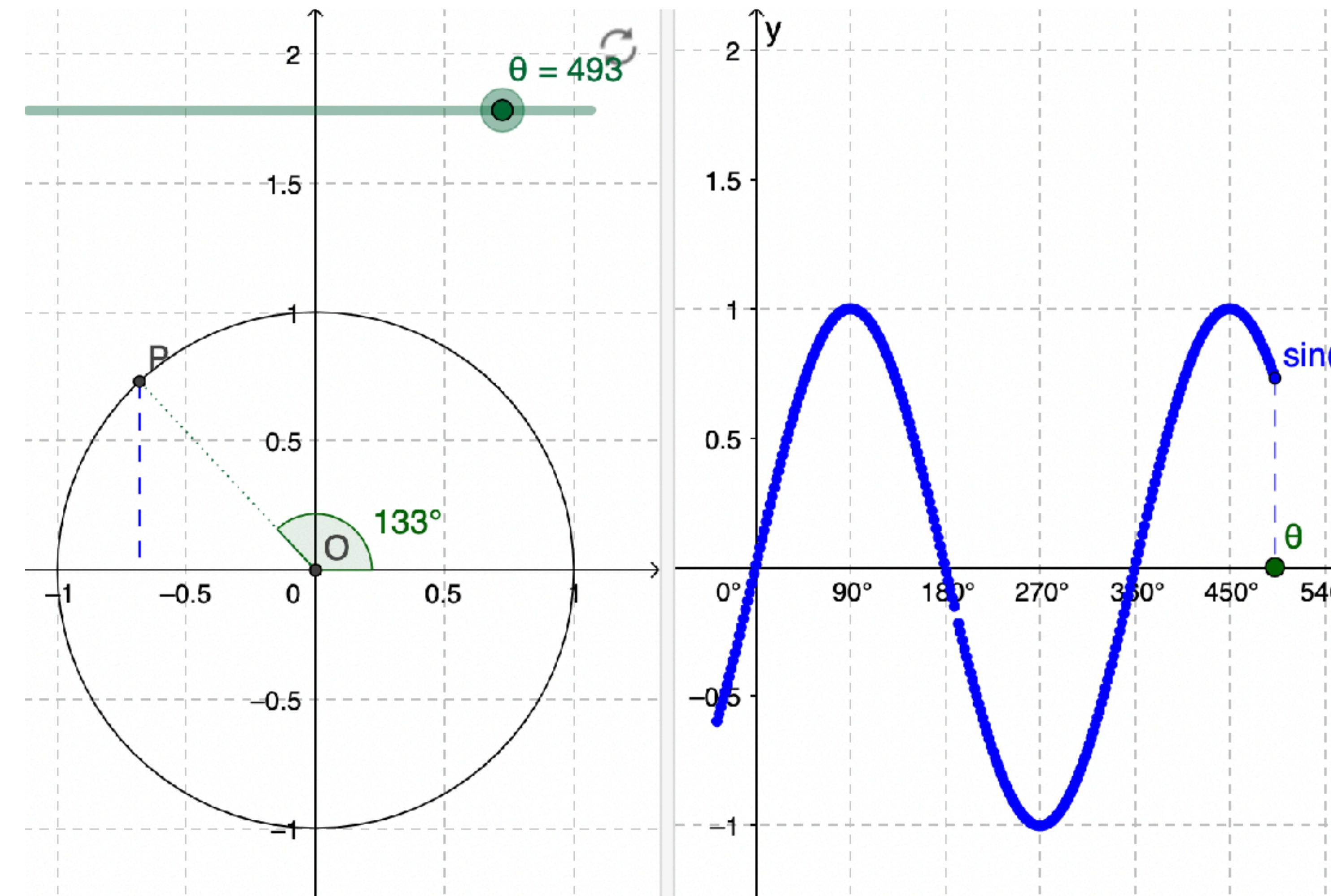
void setup()
{
    u8g2.begin();
    u8g2.setFont(u8g2_font_ncenB08_tr);
    u8g2.clearBuffer();

    u8g2.setCursor(10, 10);
    u8g2.print("Creative point ");
    u8g2.print(2021);
    u8g2.drawCircle(50, 35, 10);
    u8g2.drawCircle(50, 35, 20);
    u8g2.drawPixel(50, 35);
    u8g2.drawLine(60, 60, 90, 30);
    u8g2.drawLine(90, 30, 120, 60);
    u8g2.drawLine(120, 60, 60, 60);
    u8g2.drawFrame(0, 50, 10, 10);
    u8g2.drawBox(20, 50, 10, 10);
    u8g2.sendBuffer();
}

void loop(void)
{}
```



https://mathinsight.org/polar_coordinates



<https://www.geogebra.org/m/cNEtsbvC>

<https://x.valky.eu/elec5a>