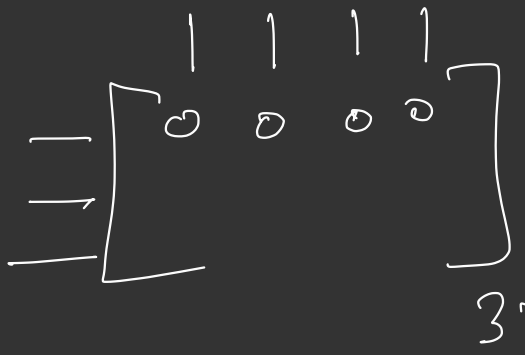
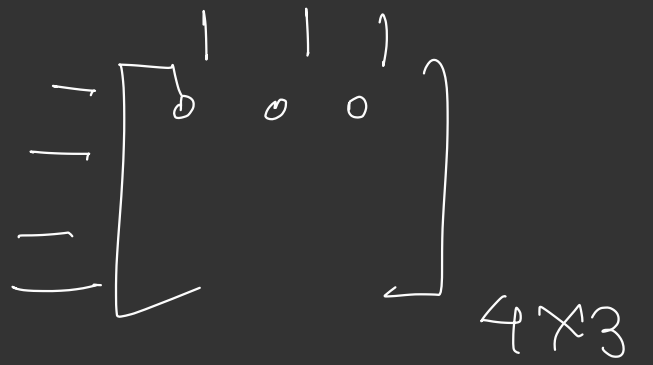
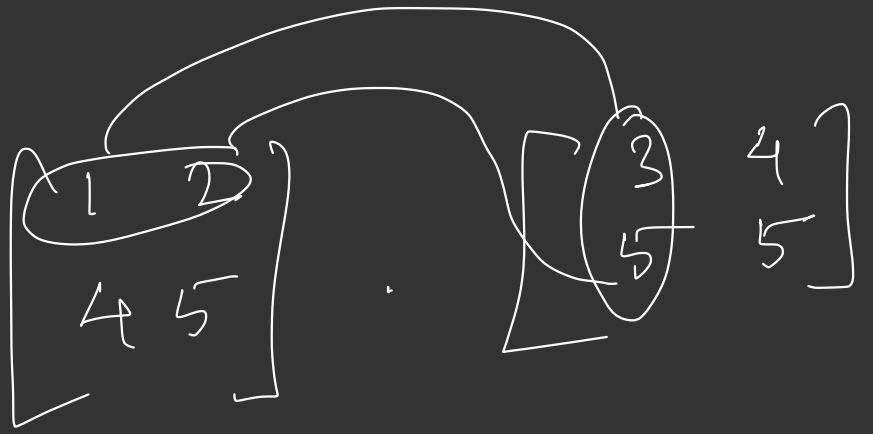




Maths

2. $\begin{bmatrix} 1 \\ 2 \end{bmatrix} = \begin{bmatrix} 2 \\ 4 \end{bmatrix}$

$\begin{bmatrix} 2 \\ 2 \end{bmatrix} = \begin{bmatrix} 2 & 1 \\ 2 & 2 \end{bmatrix}$

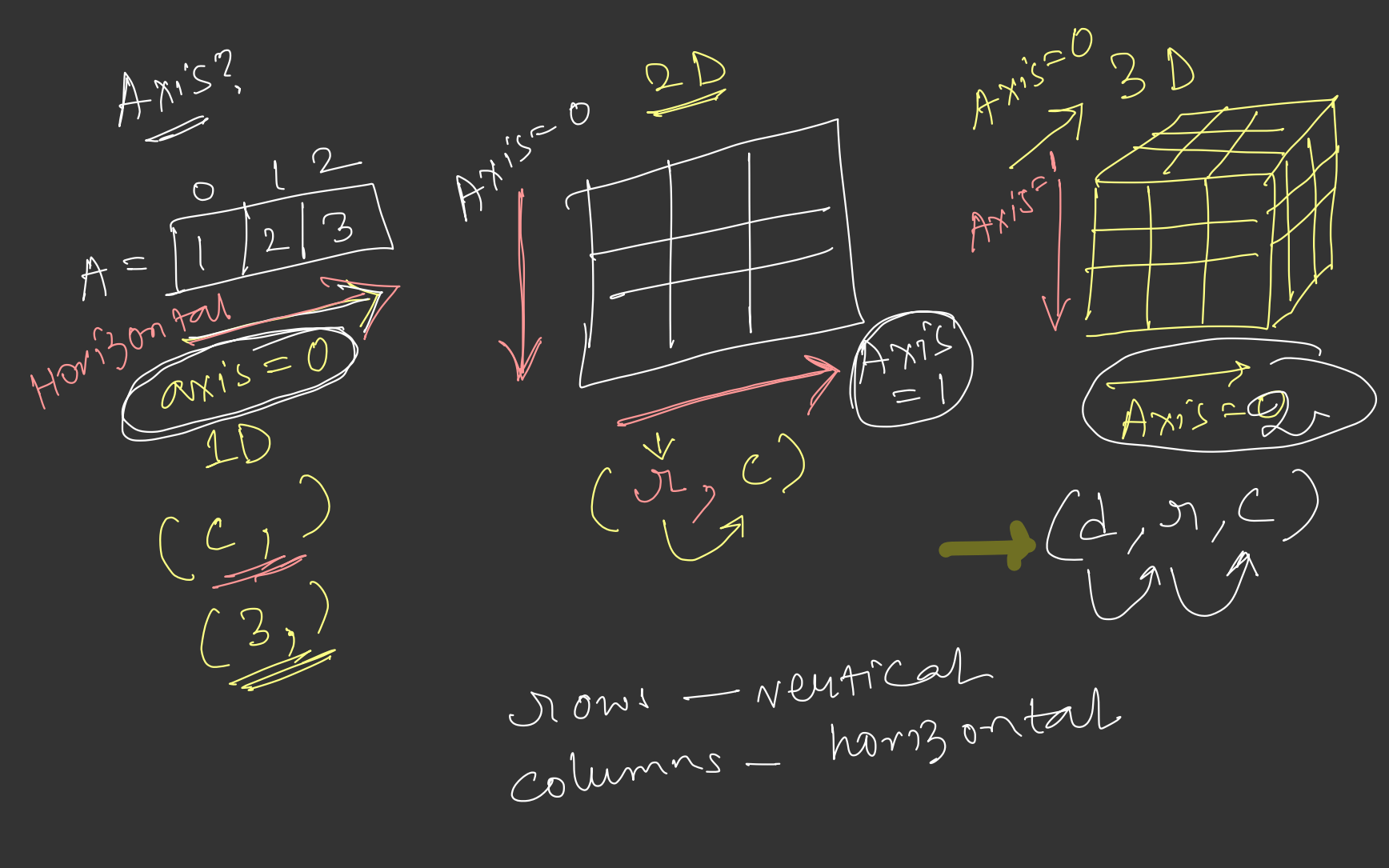


$= 1 \times 3 + 2 \times 5$

$$\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix} \begin{bmatrix} 4 & 1 \\ 2 & 2 \end{bmatrix}$$

$$= \begin{bmatrix} 4+0\times 2 & 1\times 1+0\times 2 \\ 0\times 4+1\times 2 & 0\times 1+1\times 2 \end{bmatrix}$$

$$= \begin{bmatrix} 4 & 1 \\ 2 & 2 \end{bmatrix}$$


Axis?
0 1 2
A = 1 2 3
Horizontal
axis = 0
1D
(c,)
(3,)
Axis=0
2D
Axis = 1
(r, c)
Axis=0
3D
Axis=1
Axis=2
(d, r, c)
rows — vertical
columns — horizontal

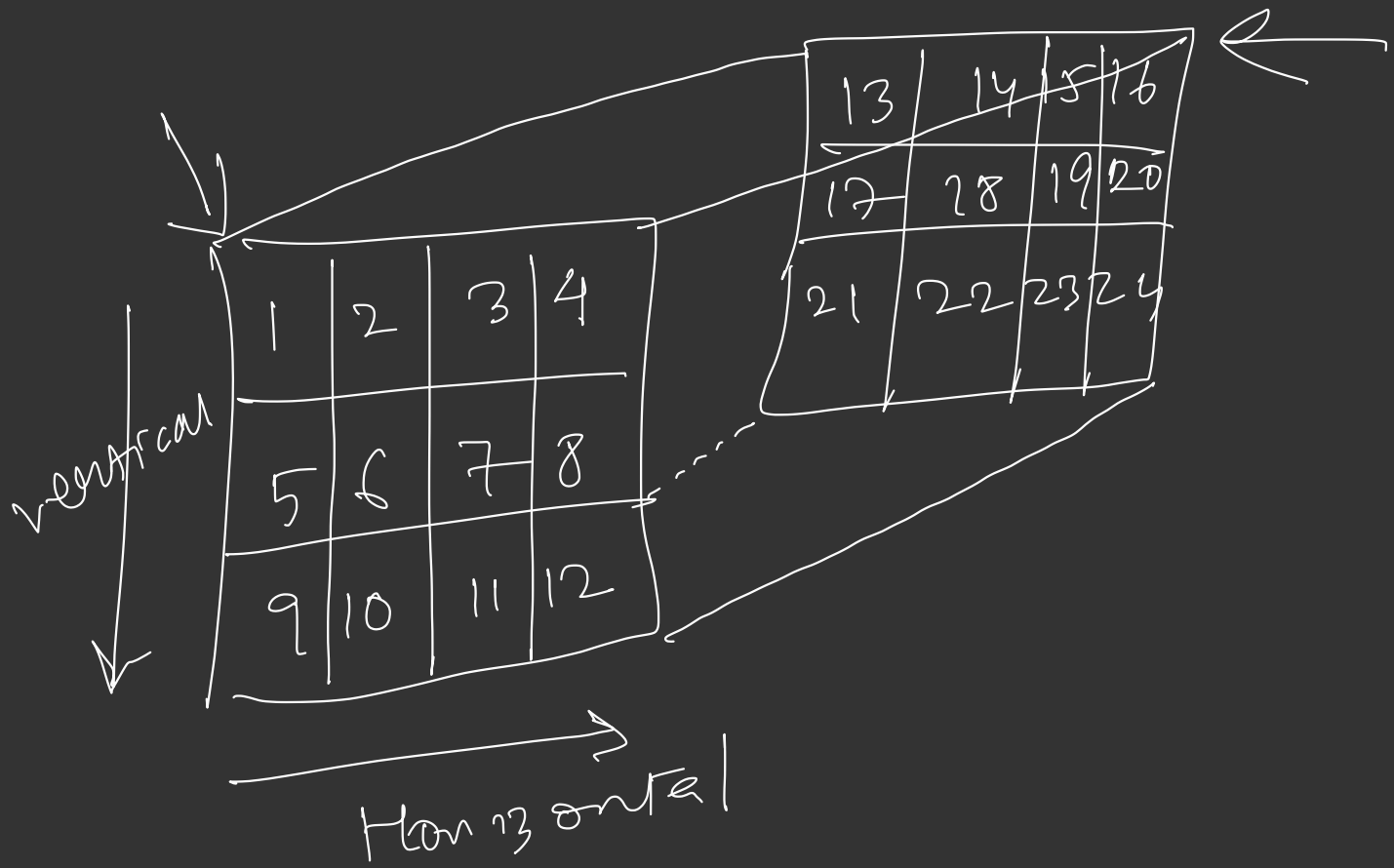
axis = -1

(r, c)

(c,)

(d, r, c)

(1, 2)


1 2 3 4
5 6 7 8
9 10 11 12
13 14 15 16
17 18 19 20
21 22 23 24
Vertical
Horizontal

A (3, 2)

B (4, 2)

Step 1: Dimension of A & B match ?

Dim(A) = Dim(B) = 2 ✓

Step 2:

2 = 2 ✓

3 = 4 ? ✗

Numpy Error

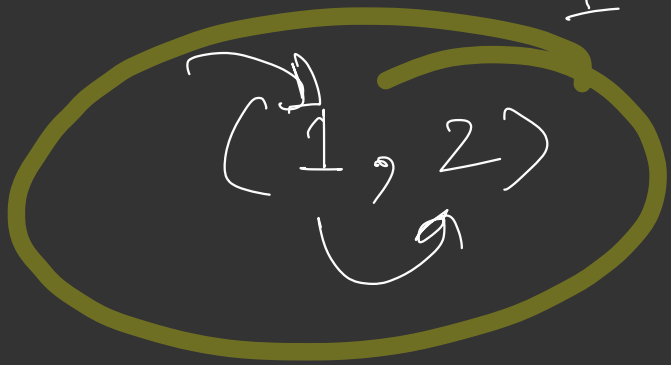
A (2,) B (3, 2)

Step 1: Dim (A) = Dim (B) ?

↳ NO.

Dim(A) ≤ Dim (B)

1 < 2



Now Dim(A) = Dim(B)

Step 2:

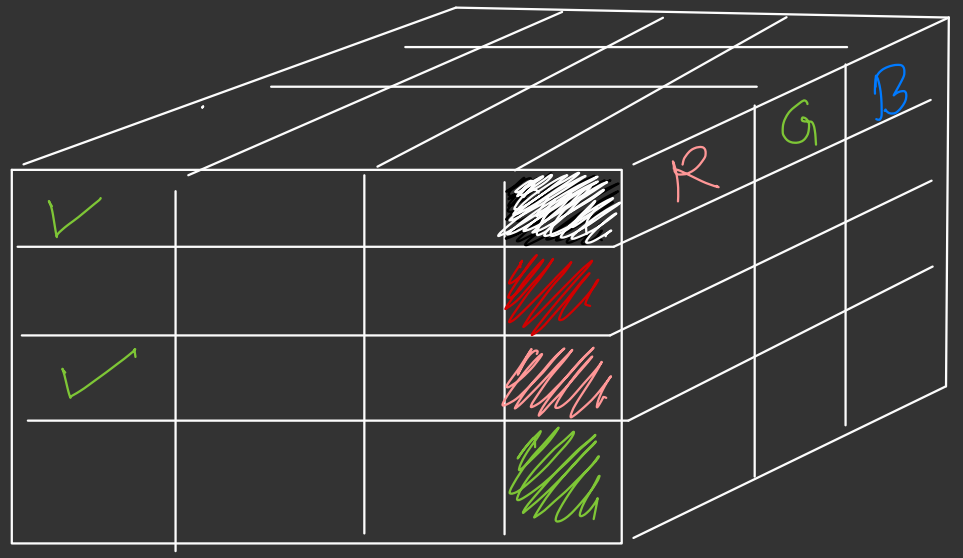
Right to left

$2 \stackrel{?}{=} 2$ Yes

$1 \stackrel{?}{=} 3$ No

$3 = 3$ Yes

A (3,2) (3,2) B



R G B

(0, 0, 0)

(255, 255, 255)

(255, 0, 0)

(0, 0, 255)

(255, 255, 0)

(0, 255, 255)

Contrast

$x_1, x_2, x_3 .. 150 .. x_4, x_5,$

$(255 - x_i)$ ← Inverse

$255 \longrightarrow 0$

$0 \longrightarrow 255$