

# Tensors ← (List)

↳ Dtype Numpy

a)  $\text{Dim}^n \rightarrow$

1  
↓  
Scalar

[1, 2, 3]  
↓  
Vector

(5) Shape  $\rightarrow$

(Tensor) (Tensor)

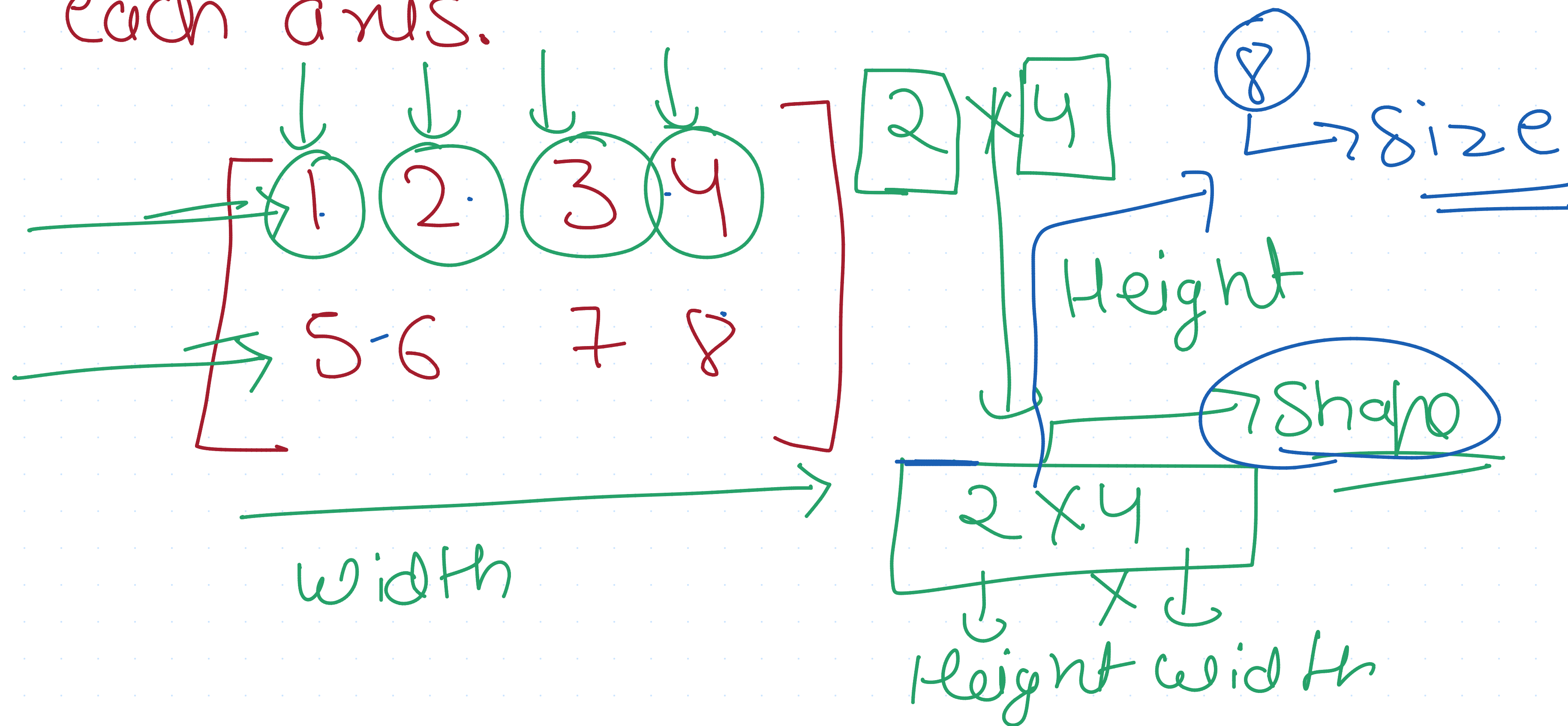
$\begin{bmatrix} 1, 2, 3 \\ 4, 5, 6 \end{bmatrix} \rightarrow \text{Matrix}$

(Tensor)

a) Size  $\longrightarrow$  Total no. of element

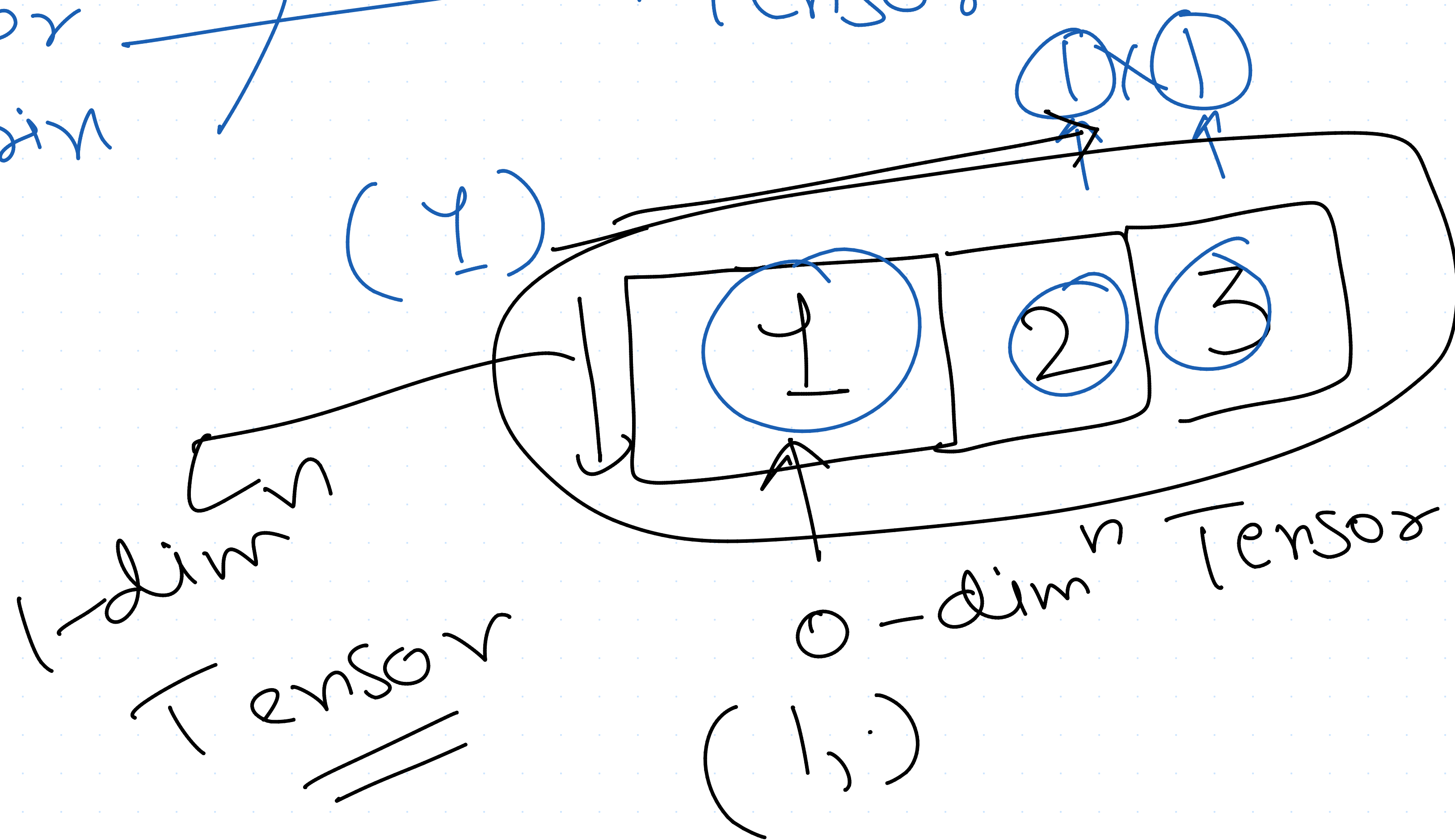
b) Dimension  $\longrightarrow$  Max<sup>n</sup> no. of element

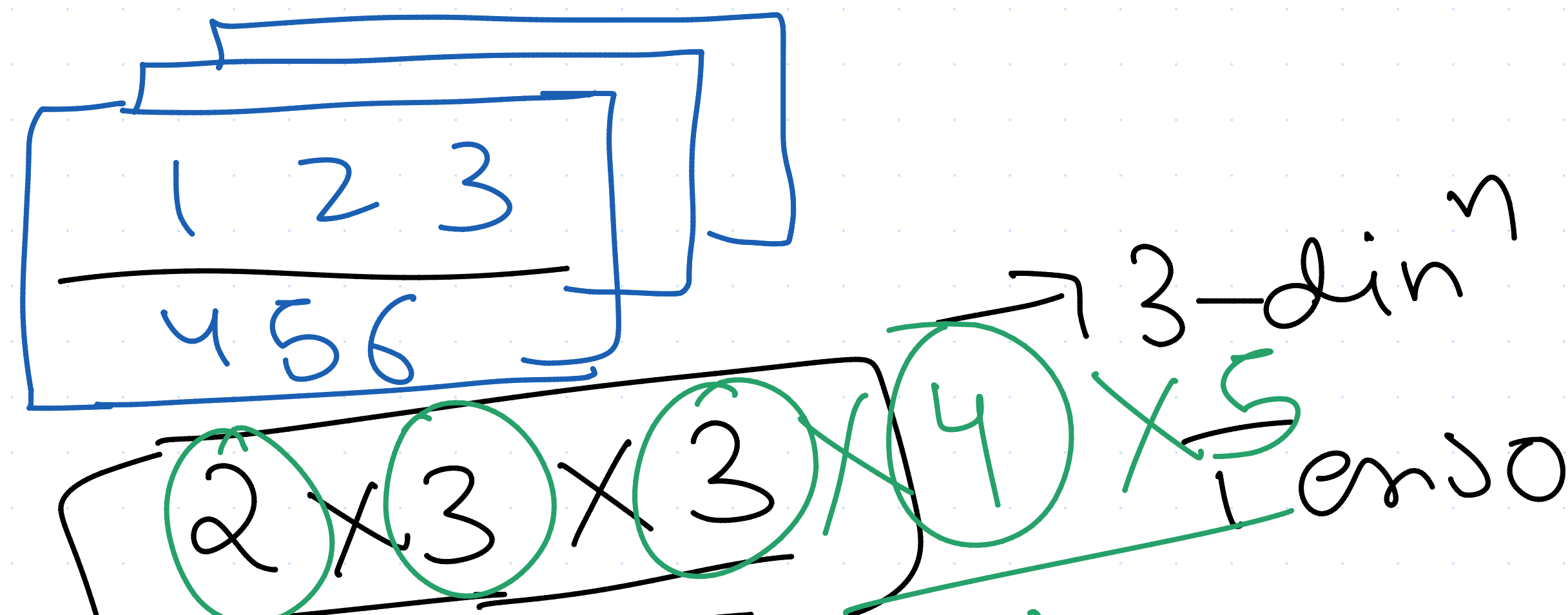
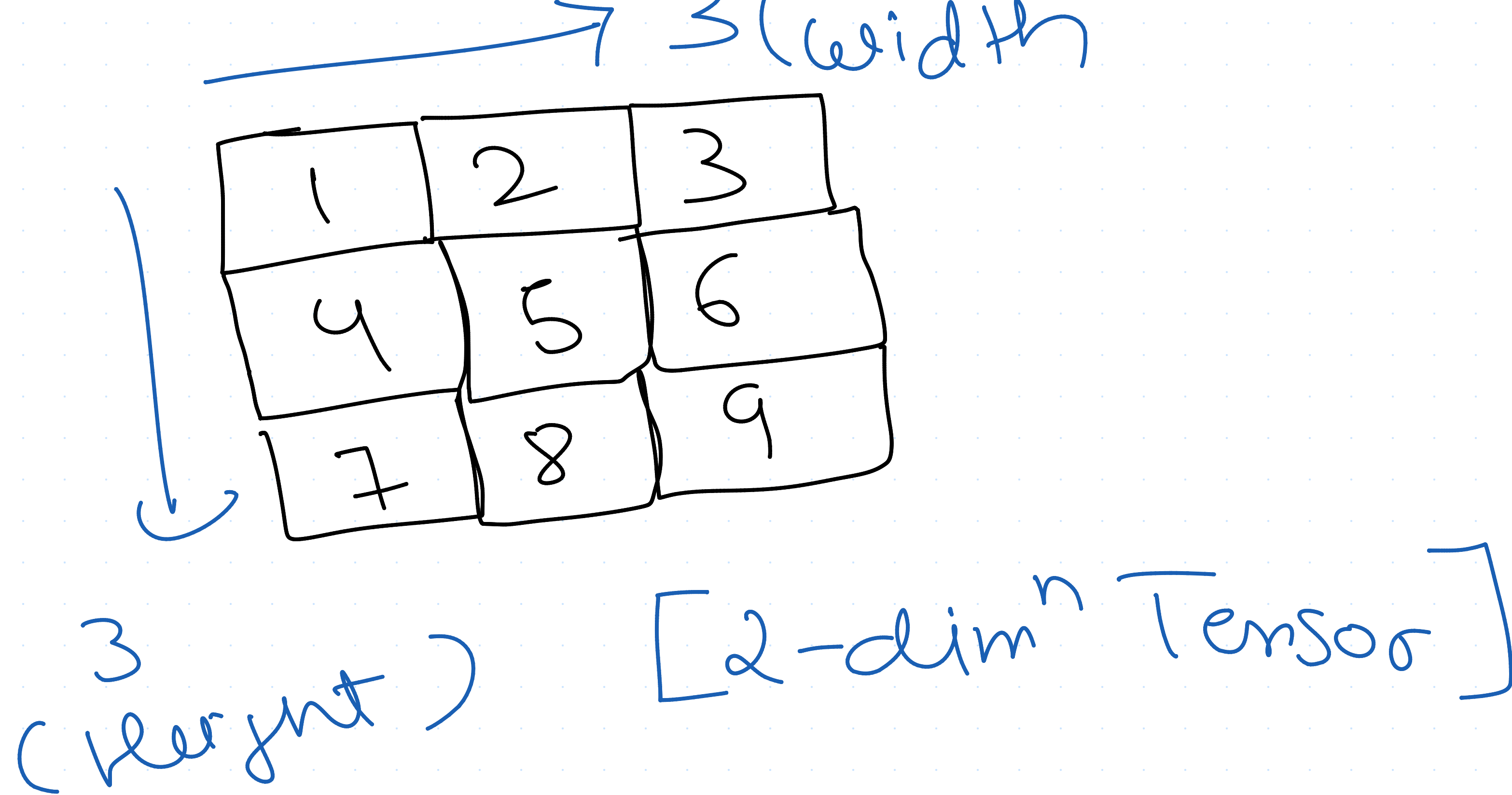
along each axis.



Scalar  
Vector  
Matrix

Tensor

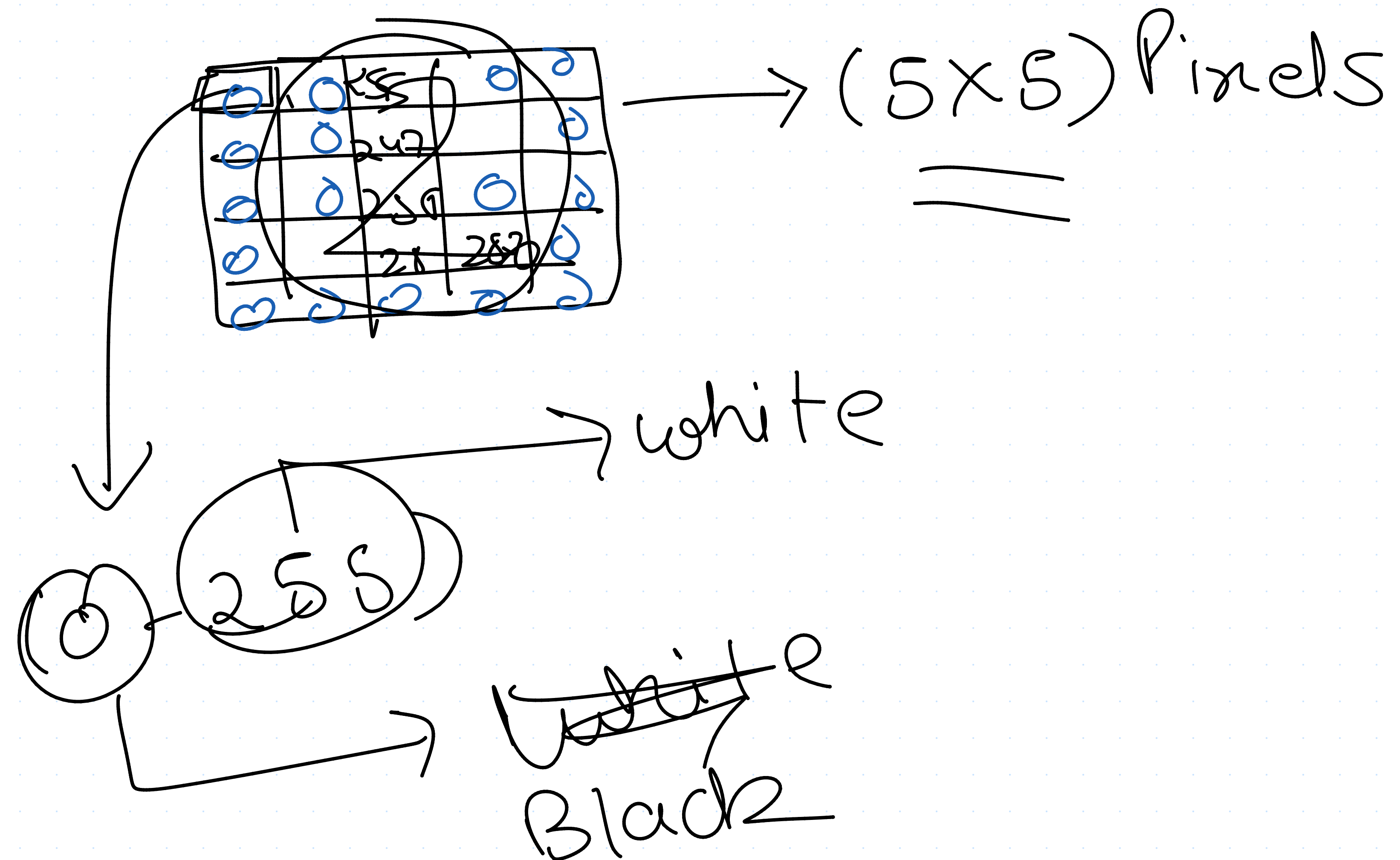




Tensor  $\rightarrow$  4-dim<sup>n</sup>  $\rightarrow$  5-dim  
Tensor

Dataframe  $\rightarrow$  P(Pf)

Rows, col<sup>m</sup>  $\rightarrow$  2-dim<sup>n</sup>  
Tensor



(5x5xRGB)

~~247 255~~

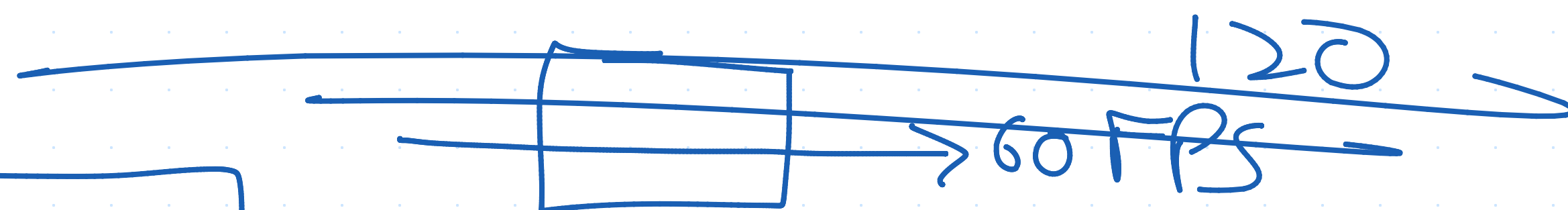
254

~~258~~

280

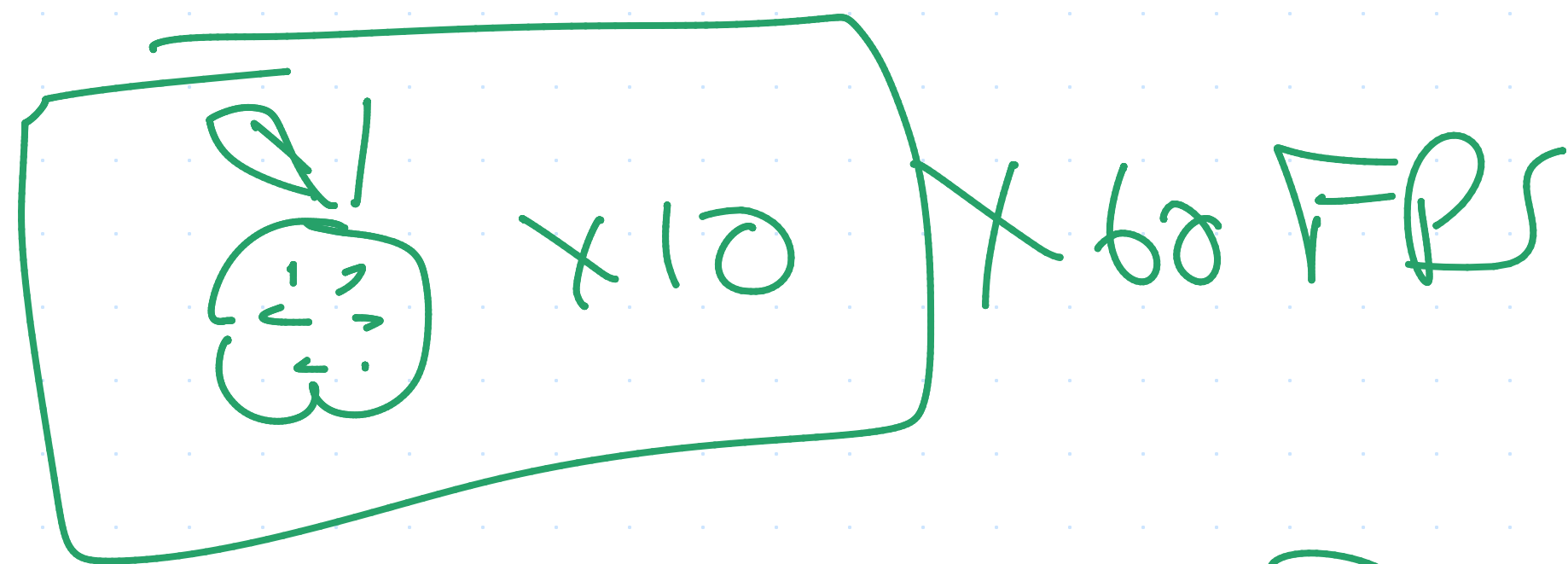
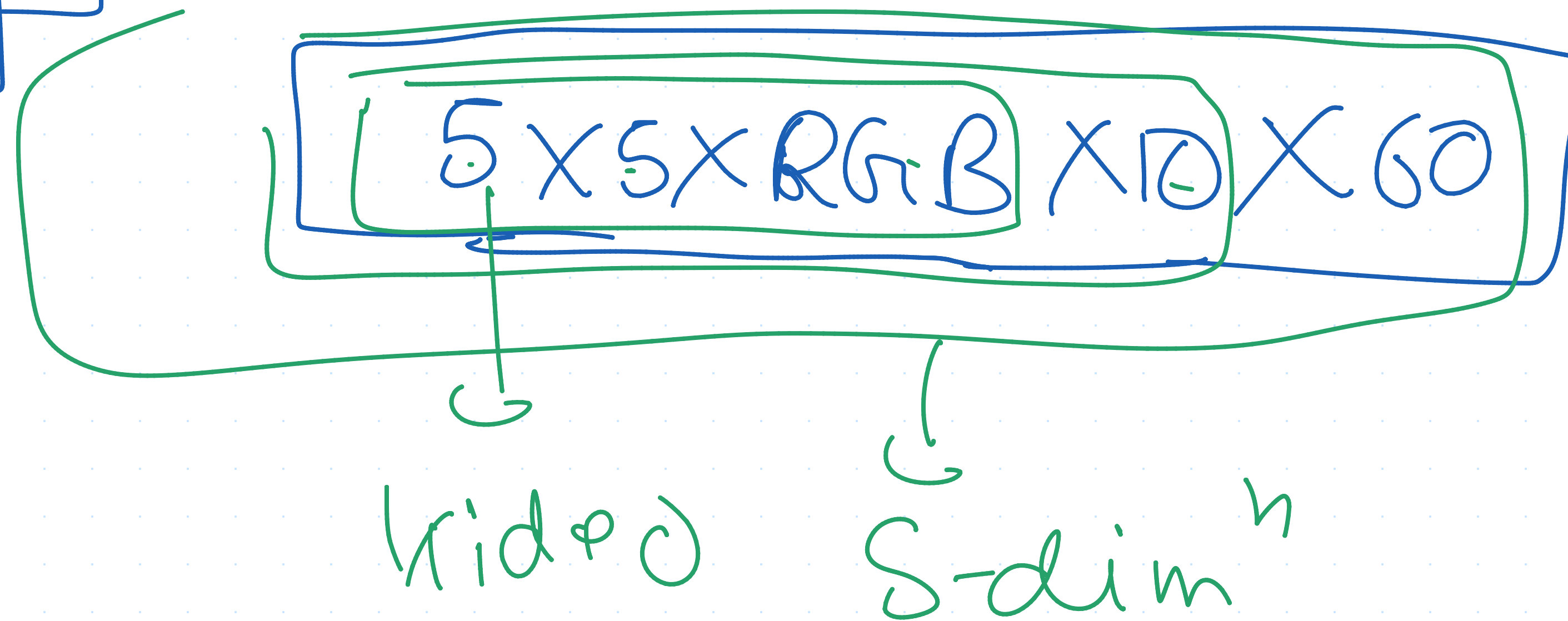
2547

~~247 247 247 247~~





1 20 FPS  
60 FPS



U-D (axes)

$4 \times 2 \times 3$

$4 \times 2 \times 3$



1	2	3	4	7
4	5	6	5	7
7	8	9	6	7

$$\begin{array}{r} 3 \times 4 \\ \hline \end{array}$$