Agenda

- Bi-Variate Analysis
  - Line-plot
  - Scatter plot
  - Countplot
  - Boxplot

- Subplots and axes

- Jointplot
- Pairplot
- Correlation Heatmap

} Special

Bi-Variate Analysis

- Variables → Relationships
  - → Comparative Analysis

Type of Bi-Variate

1. N — N
2. N - C ⟷ C - N
3. C - C

Line-plot

- Year is ordinal (Perfect for Trend)
- For a single year Values Only one corresponding y-value (Sales) is present

Scatter plot

Rank → Some codes

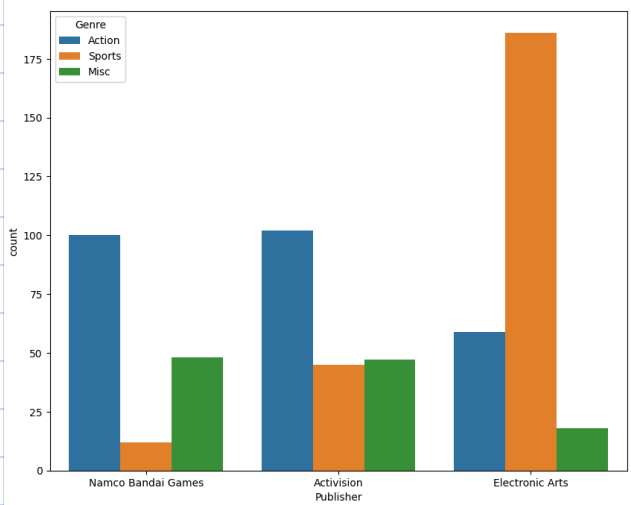
Sales → Continous

Numerical vs Numerical

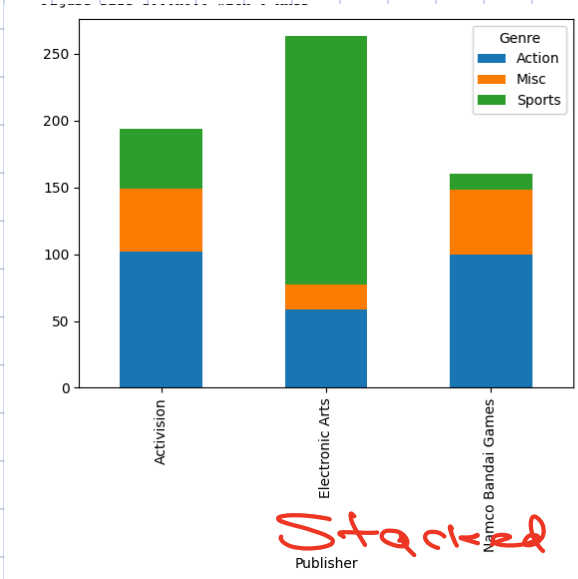
Q: What about Categorical vs Categorical

Publisher vs Platform

Countplot



Dodged

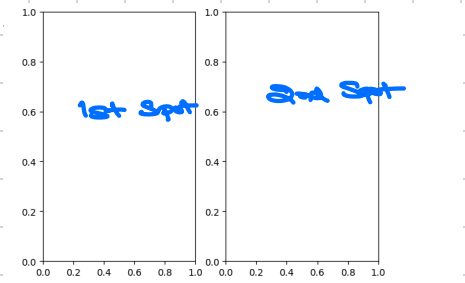


Stacked

Q2 Numerical vs Categorical

Publisher vs Sales

Subplots and Axes




```
plt.subplots(2,1)
```

```
(<Figure size 640x480 with 2 Axes>, array([<Axes: >, <Axes: >], dtype=object))
```

2, 3, ~~4~~

2*3

1	2	3
4	5	6

plt.subplot(n_row, n_cols, Spot)

① Spot method 2, 3

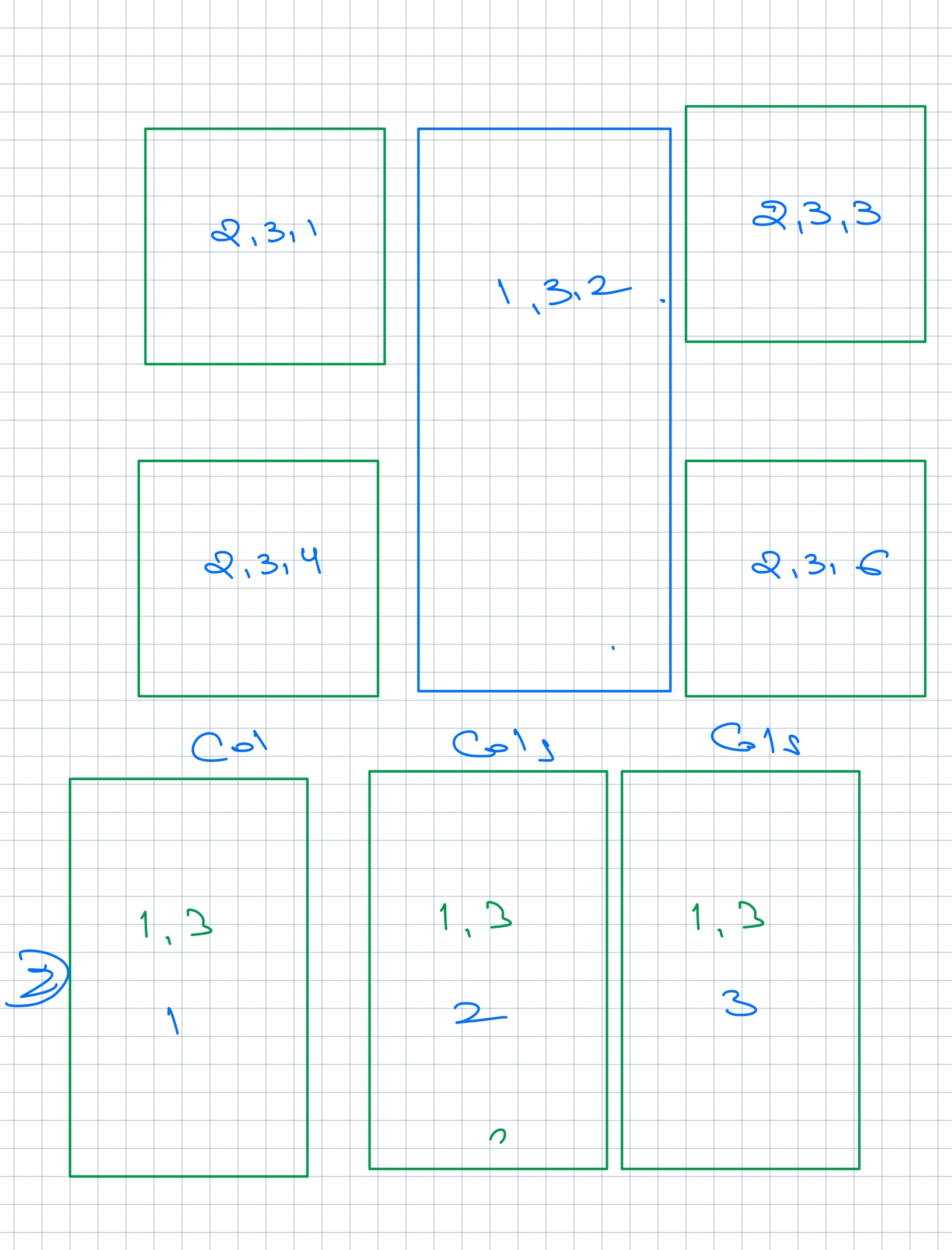
2, 3, 1 ax[0][0]	2, 3, 2 ax[0][1]	2, 3, 3 ax[0][2]
2, 3, 4 ax[1][0]	2, 3, 5 ax[1][1]	2, 3, 6 ax[1][2]

② Axes

fig, ax = plt.subplots(n_rows, n_cols)

n_rows x n_cols

- 2D Matrix
- To access any of the spots in matrix, you will need index


2,3,1
1,3,2
2,3,3
2,3,4
2,3,6
Col
Col
Col
1,3
1
1,3
2
1,3
3

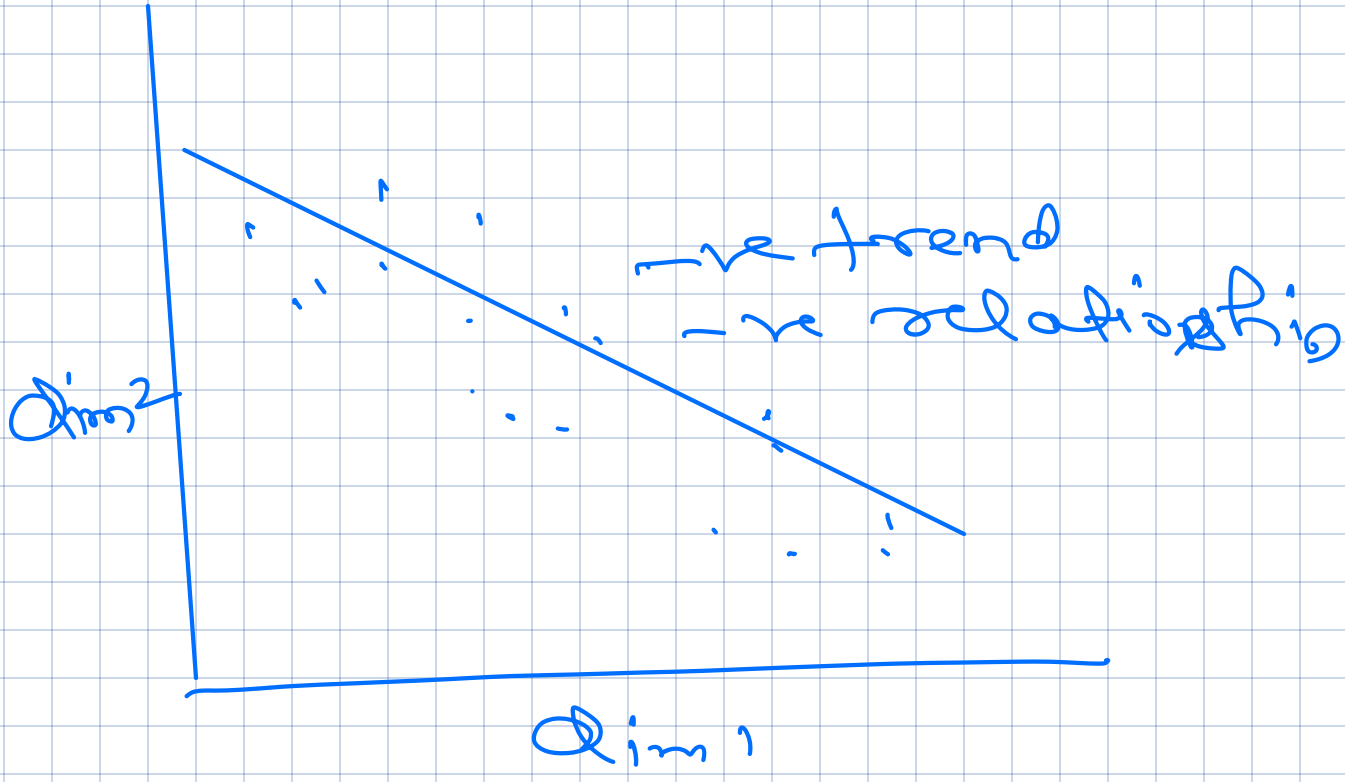
Jointplot

- Scatter
- Histogram
- kind = reg, kde,

3 in one plot

NCR

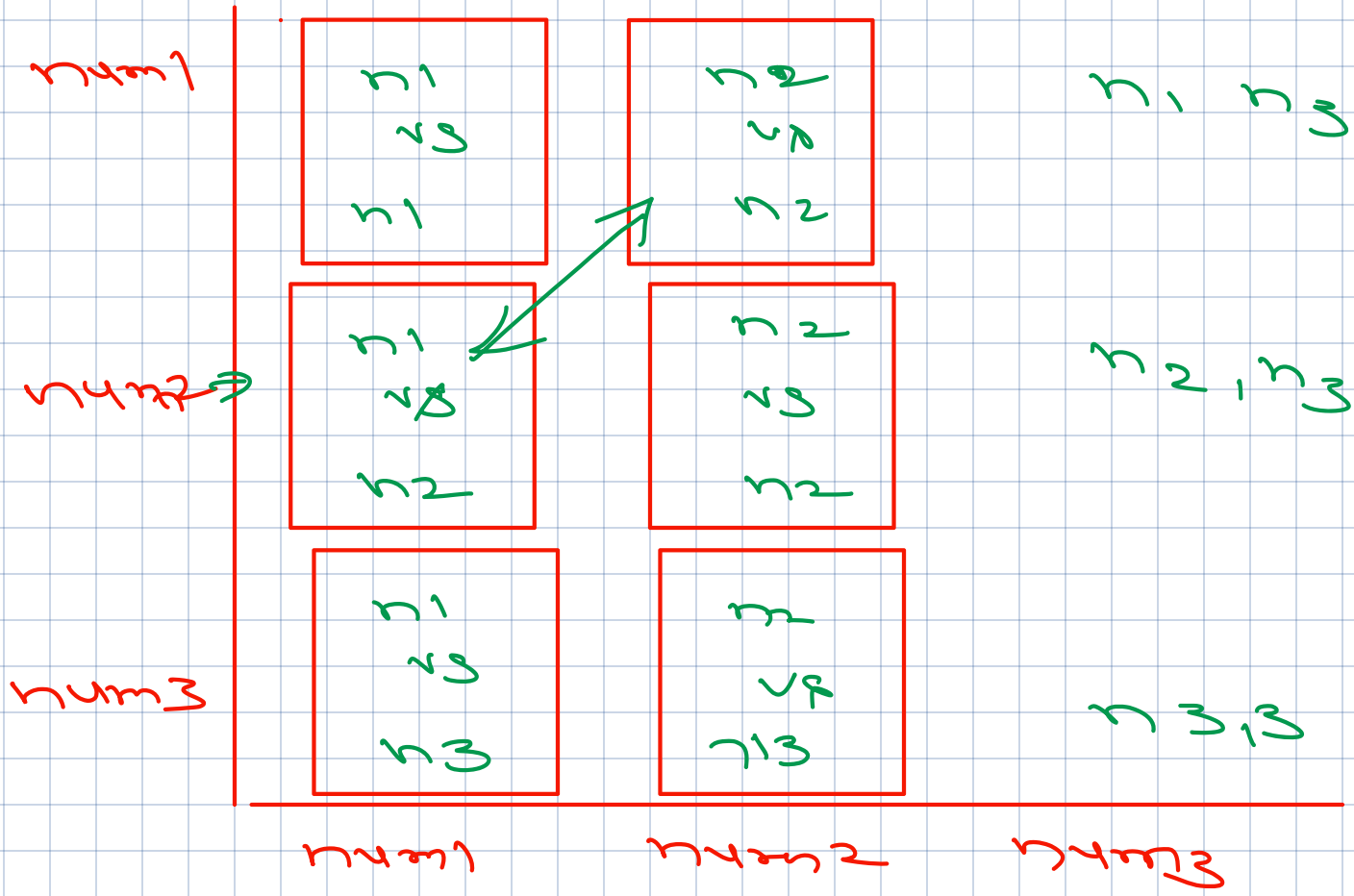
NR



Can we plot scatter for all numerical

Let's say

① How many num_cols are there → 3



3 plots → 3x3 → 9 plot

Pair plot

↓

creates multiple scatters together

Pearson Correlation

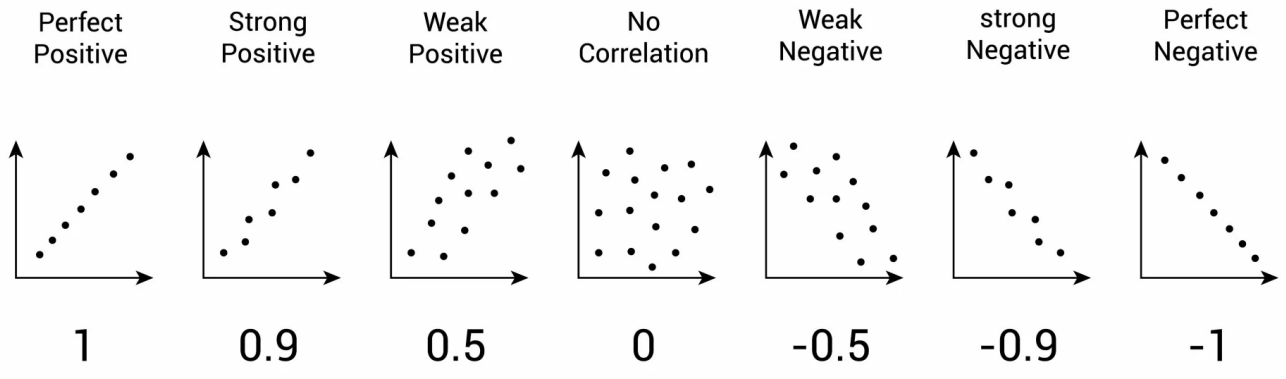
↓

(-1 , 1)

1 → very strong positive rel^n..

0 → No relationship

-1 → Very strong negative rel^n



Heatmap

- Plots Tabular Data
- Intensity of Color (Heat) defines the magnitude

9 x3