Principles of Gestalt of Visual
perception —
1. law of Pragnanz / Simplicity
2. law of Similarity
3. law of Continuity
4. law of focal point
5. law of Proximity
6. law of figure/ground

If we follow these principles, then our
visuals are going to be effective.

① Gestalt law of Pragnanz (Simplicity)
○ Human Brain likes simplicity —
Simpler things are grasped easily than
the complex ones.

○ Central law of Gestalt

○ Pragnanz = pithiness, act of being
concise & full of meaning / substance

for eg. A simple bar plot with only
one color and defined numbers.

② Gestalt law of Similarity
○ Objects with similar characteristics —
Similar colors, shapes, sizes, orientation
etc. are perceived as a group.

○ Use similar characteristics and attributes
to establish relationships b/w objects
and to reinforce groupings.

③ Gestalt law of continuity

If the visual is ordered in some way,
then it is easy to identify the
trend and pattern.

Human eyes tries to find out things
aligned with each other in some
order.

- Align elements linearly to facilitate comparison of different items that are in related grouping.

(4) Gestalt law of focal Point
- Distinctive objects create a focal point
- Inverse of the law of similarity
- Stands apart from other objects, drawing users attention.

for eg. if we making a bar plot of sales region wise and highlight the sales of south, then highlight in different color than others.

(5) Gestalt law of Proximity

- Objects placed close to one another are perceived as a group.
- Objects that are further apart are seen as unrelated or less related.

Eg. Instead of taking regions as a group, we take quarter as a group. The meaning and the objective completely changes.

(6) Gestalt law of Figure/ground

Don't keep any colored background. keep it white and simple so that the attention is drawn to the figures.

- foreground objects are more important than the background objects

- The more the contrast b/w the figure and the ground, the easier it will be to distinguish b/w the two types of objects.

Pearson correlation coefficient

$$r = \frac{n \Sigma xy - (\Sigma x)(\Sigma y)}{\sqrt{[n \Sigma x^2 - (\Sigma x)^2][n \Sigma y^2 - (\Sigma y)^2]}}$$

from the Book
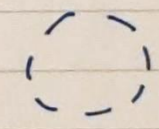
more

∧ Gestalt Principles (NOT included in PPT)

1. Enclosure - Objects that are Physically enclosed together are considered/ seen as part of a group belonging together.
It doesn't take a strong enclosure to do this : light background shading is open enough
eg.

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2. Closure - The closure concept says that people like things to be simple and to fit in the constructs that are already in our heads.
For eg.   Our brains would see this figure as a circle (fill the gaps automatically) first and then look at it as individual elements.

The closure principle tells us that the elements like borders, background shading etc. are unnecessary and create clutter.

3. Connection - Objects that are physically connected are seen as part of a group.
The connective property has a stronger associative value than similar color, size or shape.
for eg.

In this figure, we may see that different points are connected (instead of considering different colors)