“Bar graphs, Column Graphs, Venn Diagrams”

Pre Read

Relevel
by Unacademy

For effective calculations, you must be comfortable with-

Tables from 1 to 20, squares and square roots from 1 to 20, cubes and cube roots from 1 to 20, reciprocals as a percentage from 1 to 25. Learn the reciprocals given below and try to use them for fast calculations.

Learn the reciprocals given below and try to use them for fast calculation:

1/1 = 100%
1/2 = 50%
1/3 = 33.33%
1/4 = 25%
1/5 = 20%
1/6 = 16.66%
1/7 = 14.28%
1/8 = 12.5%
1/9 = 11.11%
1/10 = 5%

1/11 = 09.09%
1/12 = 8.33%
1/13 = 7.7%
1/14 = 7.14%
1/15 = 6.66%
1/16 = 6.25%
1/17 = 5.88%
1/18 = 5.55%
1/19 = 5.26%
1/20 = 5%

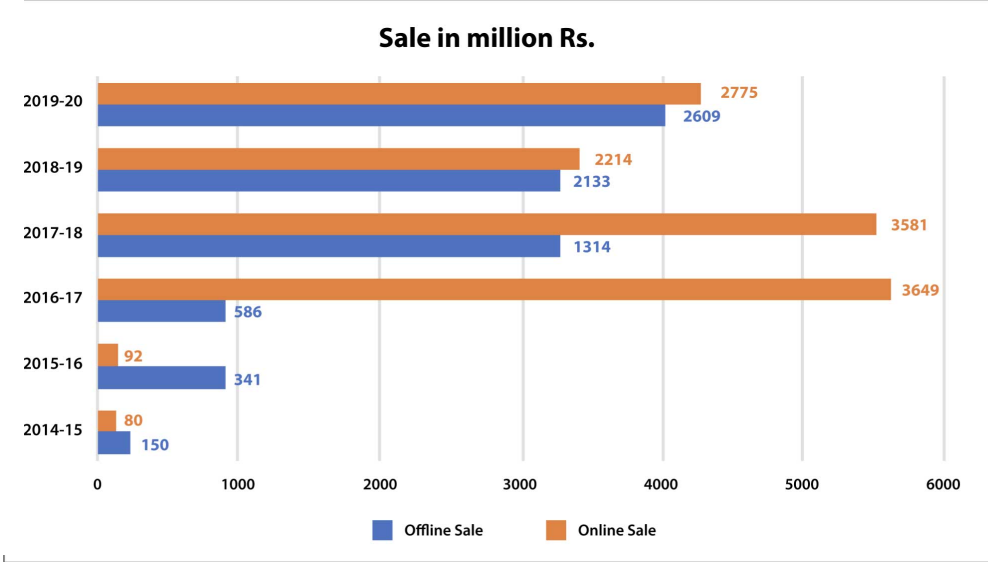
1/21 = 4.76%
1/22 = 4.54%
1/23 = 4.34%
1/24 = 4.16%
1/25 = 4%

In the upcoming class, we will learn about Bar Graphs, Column Graphs, and Venn Diagrams.

Bar and Column graphs

Bar graph is used to represent the data in a discrete way. In the Bar graph, data is represented by height and the width of the bar does not hold any significance. Bar graphs can either be horizontal or in a vertical orientation.
In vertical orientation, it is usually called a **Column Graph** while in the horizontal form it is referred to as **Bar Graph**. In the given example, the bar chart gives a break up of sales of educational products for the years 2014-15 to 2019-20. The sale of educational products is only through two channels – offline and online.

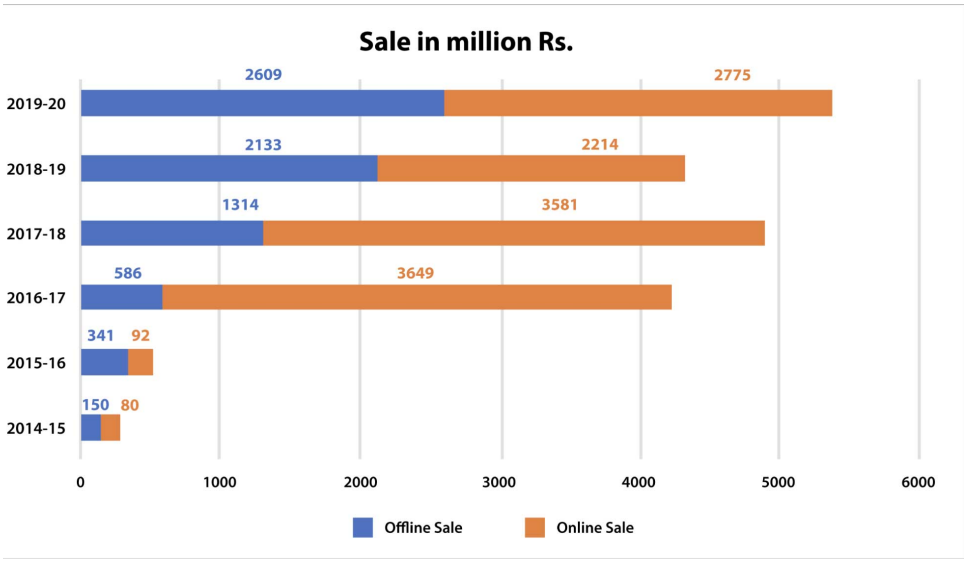
Clustered Bar Chart:



From this, one can easily arrive at the following conclusions-

1. The absolute as well as percentage increase or decrease in total sales over the years for each category – offline and online
2. The highest/ lowest values of the total sales by category and by year.
3. Contribution of each category as a percentage of total sales in that year
4. Trend over the years

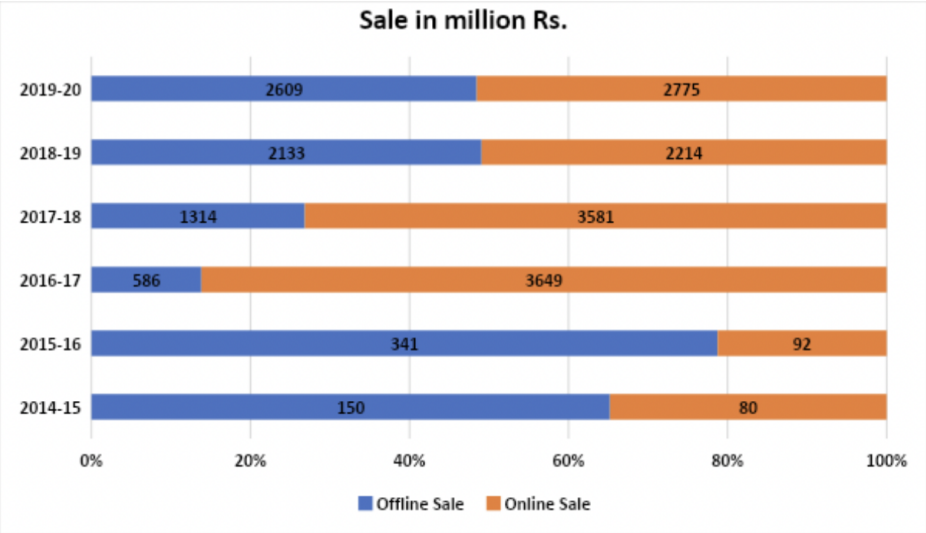
Stacked Bar Chart:



From this, one can easily infer the following-

1. Comparison of the contribution of each category total sales in that year
2. Total of the categories as well as the individual figures in a particular year
3. Both categories are represented along a single Bar.

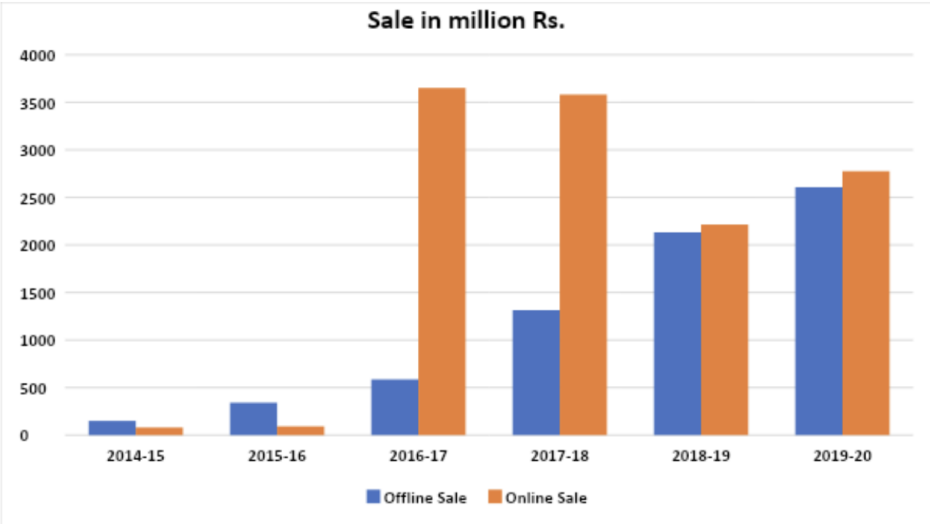
100% Stacked Bar Chart:



From this, one can easily infer the following:

1. Comparison of values by percentage contribution to the total.
2. The percentages are given clearly, so it is easy to derive the contribution of each category.
3. Amount of sales is clearly indicated; it would be easy to estimate the total sales by each category.

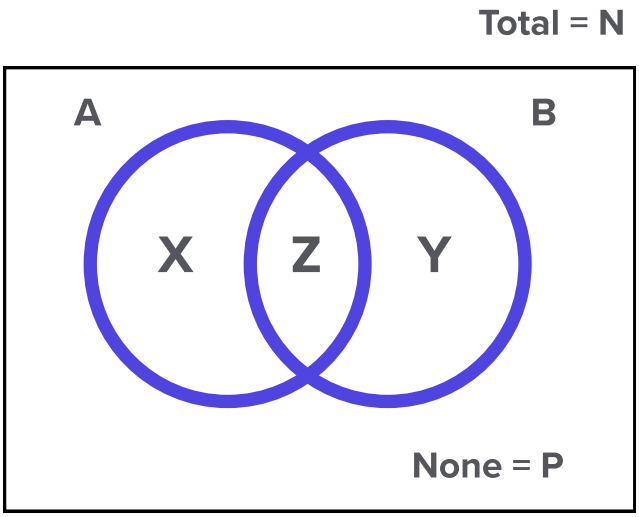
Column Bar Graph:



From this, one can easily arrive at similar conclusions as that of the Clustered Bar Chart.

Venn Diagram

Venn diagrams are the diagrams that are used to represent the sets, relation between the sets, and operations performed on them, in a pictorial way. Venn diagrams are also called logic or set diagrams and are widely used in set theory, logic, mathematics, business, and statistics.



Data Reading in 2 variable Venn Diagram:

Only A = x
Only B = y
A & B = z
Exactly one = x+y
Exactly two = z
At least one = Exactly one + exactly two = x + y + z
Total N = x + y + z + P
A = x + z
B = y + z
A + B = x + y + 2z
A or B = x + y + z
Does not belong to A = y + P
Does not belong to B = x + P