Basics of Data Interpretation (Part 3) for Bank Exams

Embark on the next phase of mastering quantitative analysis with **Basics of Data Interpretation (Part 3)** tailored for **Bank exams**. This comprehensive guide delves into advanced aspects, ensuring a nuanced understanding of interpreting complex data sets. Aspiring bankers will navigate through intricate scenarios, honing skills crucial for success in quantitative sections of bank exams. From charts to tables, this resource equips you with the expertise needed to tackle diverse data interpretation challenges, propelling your confidence and performance in the competitive banking landscape. Engage in this educational journey to elevate your quantitative abilities and excel in bank exams.

As it is clear from the name, this is the third part of the **Data Interpretation series**. So, before continuing to this blog, read the first and second part i.e. Learn the basics of Data Interpretation for Bank Exams and Data Interpretation (Part 2) for Bank Exams. If you've already done reading, let's start with **Mixed Graphs** then.

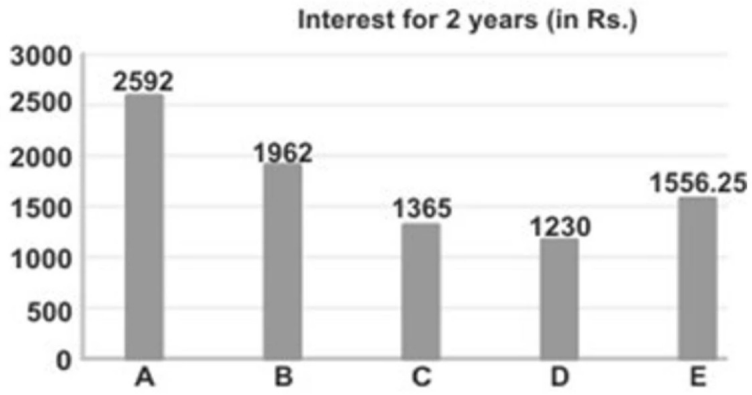
Mixed Graphs

This would be the last unit in the series of data interpretation where we learn about Mix graphs; it could be a combination of table, line graph, pie charts, bar graph, etc. Nothing would be different, only data is extra given to you so it takes comparatively extra time to consume it.

It happens in many cases, where the desired parameter is a function of two or three variables and we need more than one type of graph together to represent the data. We can only learn concepts better by learning from examples so let's start.

Questions on Table with Bar Graph

E.g. Given question contains a bar graph that contains the interest on a principal in two years. All the principals are given at Compound Interest compounded annually. The table gives the principal in five schemes.



Asutosh Mukherjee Road, College Para, Hathi More, Siliguri, West Bengal
+91 - 8436586516, +91-8436900456
thedhronas@gmail.com
thedronas.com

Scheme	Principal (in Rs)
A	7500
B	5000
C	6500
D	12000
E	10000

(1) If the smallest principal amounts out of all 5 is invested at rate equal to that in scheme D for 8 years at simple interest, the interest (in Rs) is?

(2) The ratio of Interest amount in the first year from schemes D and E is?

(3) If the average amount of all the principal is invested for 3 years at the rate of 20% per annum at simple interest, then find the amount after 3 years.

(4) The annual rate of B is what percent of the annual rate of C?

(5) Find the amount (in Rs) after 3 years in scheme A.

Sol: (1) Principal (D) = 12000 Interest for 2 years = Rs 1230

Amount = 12000 + 1230 = Rs 13230

$A = P(1 + r/100)^2$

$\Rightarrow 13230 = 12000(1 + r/100)^2$

$\Rightarrow 1.05 = 1 + r/100$

$\Rightarrow r = 5\%$

Principal = Rs 5000

$\Rightarrow$ Simple Interest = $(P \times R \times T)/100 = (5000 \times 5 \times 8)/100$ = Rs 2000 (**Ans.**)

(2) Principal (D) = 12000 Interest for 2 years = Rs 1230

Amount = 12000 + 1230 = Rs 13230

Asutosh Mukherjee Road, College Para, Hathi More, Siliguri, West Bengal
+91 - 8436586516, +91-8436900456
thedhronas@gmail.com
thedronas.com

r = 5% (from last question)

Interest in first year = 5% of 12000 = Rs 600

Principal (E) = 10000

Interest for 2 years = Rs 1556.25

Amount = 10000 + 1556.25 = Rs 11556.25 $A = P (1 + R/100)^2$

$\Rightarrow 11556.25 = 10000 (1 + R/100)^2$

$\Rightarrow 1.075 = 1 + R/100$

$\Rightarrow R = 7.5\%$

Interest in 1st year = 7.5% of 10000 = Rs 750

Ratio = 600 : 750 = 4 : 5 (**Ans.**)

(3) Principal = (7500 + 6500 + 5000 + 12000 + 10000)/5 = Rs 8200

Interest = 20% Time = 3 years

Amount = principal + Interest

$A = P + (P \times R \times T)/100 = 8200 + (8200 \times 20 \times 3)/100$ = Rs 13120 (**Ans.**)

(4) Principal (B) = 5000 Interest for 2 years = Rs 1962

Amount = 5000 + 1962 = Rs 6962

$A = P (1 + r/100)^2$

$\Rightarrow 6962 = 5000 (1 + r/100)^2$

$\Rightarrow 1.18 = 1 + r/100$

$\Rightarrow r = 18\%$

Principal (C) = 6500

Interest for 2 years = Rs 1365

Amount = 6500 + 1365 = Rs 7865

$A = P (1 + R/100)^2$

$\Rightarrow 7865 = 6500 (1 + R/100)^2$

Asutosh Mukherjee Road, College Para, Hathi More, Siliguri, West Bengal
+91 - 8436586516, +91-8436900456
thedhronas@gmail.com
thedronas.com

⇒ 1.1 = 1 + R/100

⇒ R = 10%

Required percentage = (18/10) × 100 = 180% (**Ans.**)

(5) Principal = 7500

Interest for 2 years = Rs 2592

Amount = 7500 + 2592 = Rs 10092

$A = P (1 + r/100)^2$

$\Rightarrow 10092 = 7500 (1 + r/100)^2$

⇒ 1.16 = 1 + r/100

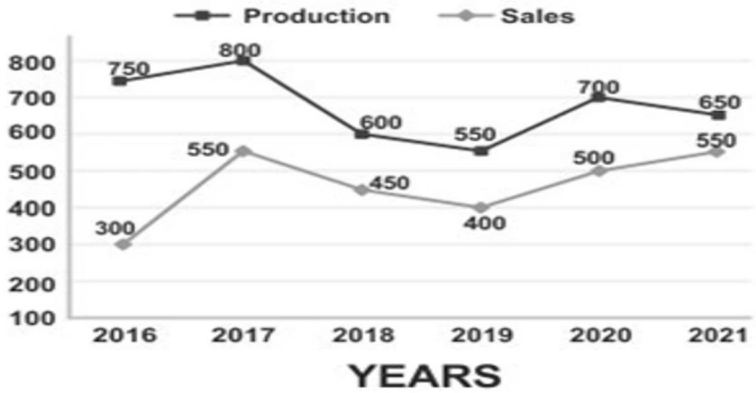
⇒ r = 16%

Amount after three years = (100 + 16)% of amount after two years = 1.16 × 10092 = Rs 11706.72 (**Ans.**)

Questions on Table with Line Graph

E.g. Study the following information and answer the question given below. **[SBI Clerk Mains 2022]**

The graph shown below represents the production and sales (in tonnes) of company X from 2016 to 2021.



The table given below represents the ratio of the production (in tonnes) of company X to the production (in tonnes) of company Y, and the ratio of the sales (in tonnes) of company X to the sales of company Y (in tonnes).

Asutosh Mukherjee Road, College Para, Hathi More, Siliguri, West Bengal
+91 - 8436586516, +91-8436900456
thedhronas@gmail.com
thedronas.com

Year	Production (X : Y)	Sales (X : Y)
2016	5 : 4	2 : 3
2017	8 : 7	11 : 12
2018	3 : 4	9 : 14
2019	11 : 12	4 : 5
2020	14 : 13	10 : 91
2021	13 : 14	1 : 1

(1) What is the approximate percentage increase in the pro- duction of company X (in tonnes) from the year 2019 to the production of company X (in tonnes) in the year 2020?

(2) What is the ratio of the total production (in tonnes) of company Y to the total sales of Company Y?

(3) What is the average production of company Y (in tonnes) from the year 2016 to 2021?

Sol: (1) Production of X in 2019 = 550 tonnes

Production of X in 2020 = 700 tonnes

Percentage increase = [(700 - 550)/550] × 100 = 27.27% = 27% (approx.) (**Ans.**)

(2) Total production of Y from 2016 to 2021:

= [(750 × 4/5) + (800 × 7/8) + (600 × 4/3) + (550 × 12/11) + (700 × 13/14) + (650 × 14/13)] = 4050 tonnes

Total sale of Y from 2016 to 2021:

= [(300 × 3/2) + (550 × 12/11) + (450 × 14/9) + (400 × 5/4) + (500 × 9/10) + (550 × 1/1)] = 3250 tonnes

Required ratio = 4050 : 3250 = 81 : 65 (**Ans.**)

(3) Total production of Y from 2016 to 2021:

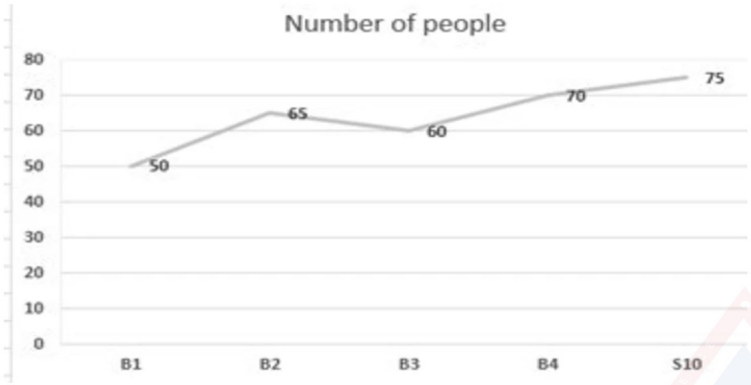
= [(750 × 4/5) + (800 × 7/8) + (600 × 4/3) + (550 × 12/11) + (700 × 13/14) + (650 × 14/13)] = 4050 tonnes

Average = 4050/6 = 675 tonnes (**Ans.**)

Asutosh Mukherjee Road, College Para, Hathi More, Siliguri, West Bengal
+91 - 8436586516, +91-8436900456
thedhronas@gmail.com
thedronas.com

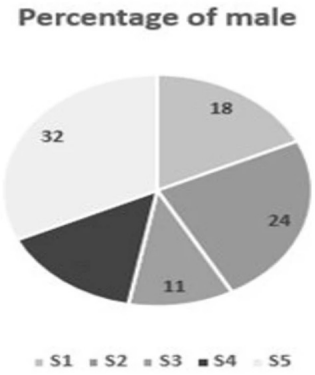
Questions on Line Graph with Pie Chart

E.g. Study the following graphs and answer the following questions. The following line graph shows the number of people travelling on a train in different compartments.



The following pie chart shows the number of male persons travelling in a different compartment.

The total number of male persons in all the compartments = 200.



(1) Find the ratio of the total number of males in the compartments S1, S2, S3, S4, and S5 that of the total number of people in the compartments B1, B2, B3, and B4.

(2) If 6 passengers each from B2 get off at every coming station, the number of people left in the compartment before the arrival of 5th station is?

(3) If the total number of people in compartment S4 is 65, then the number of females in compartment S4 is what percent of the total number of people in B3 and B4? (Find approx. value)

Asutosh Mukherjee Road, College Para, Hathi More, Siliguri, West Bengal
+91 - 8436586516, +91-8436900456
thedhronas@gmail.com
thedronas.com

Sol: (1) From the pie chart, we know the number of males in S1, S2, S3, S4, and S5 = 200.

Total number of people in the compartment B1, B2, B3, and B4 = 50 + 65 + 60 + 70 = 245.

Ratio = 200/245 = 40 : 49 (**Ans.**)

(2) According to the question,

6 passengers each get off at every coming station.

So, the number of passengers who get off at every station before the arrival of the 5th station

(i e. Till the 4th station) = 6 × 4 = 24 passengers.

Hence, number of passengers left in the compartment before the arrival of station = 65 - 24 = 41 (**Ans.**)

(3) According to the question,

The total number of people in compartment S4 = 65.

The total number of males in the compartment S4 = 15% of 200 = 30.

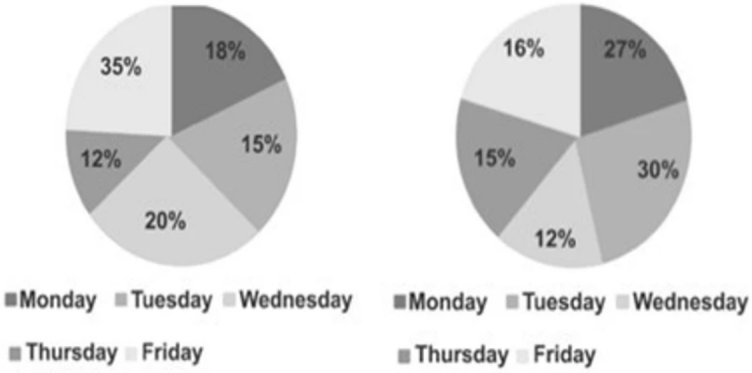
So, the number of females = 65 - 30 = 35

The total number of people in the compartment B3 and B4 = 60 + 70 = 130

Percentage = (35/130) × 100 = 26.92% = 27% (**Ans.**)

Questions on Double Pie Chart

E.g. Directions: The first pie chart shows the number of visitors on Taj Mahal on different days of the week. The second pie chart shows the number of visitors of India Gate on different days of the week.



Asutosh Mukherjee Road, College Para, Hathi More, Siliguri, West Bengal
+91 - 8436586516, +91-8436900456
thedhronas@gmail.com
thedronas.com

(1) If the total number of visitors of Taj Mahal during the week was 800 and the ratio of number of visitors of India Gate on Tuesday to the number of visitors of Taj Mahal on Wednesday is 3 : 1 then find the total number of visitors of India Gate.

(2) The total number of visitors of Taj Mahal and India gate are in the ratio of 3 : 4 then what is the ratio of the total number of visitors of Taj Mahal on Friday and Monday to the total number of visitors of India Gate on Tuesday and Monday?

Sol: (1) The total number of visitors of Taj Mahal is 800.

Number of visitors of Taj Mahal on Wednesday = 20% of 800 = 0.2 × 800 = 160

Number of visitors of India Gate on Tuesday = 160 × 3 = 480

30% is equal to 480 100% would be = 480/0.3 = 1600 (**Ans.**)

(2) Let the total number of visitors of Taj Mahal and India gate be 300x and 400x respectively.

Total number of visitors of Taj Mahal on Friday and Monday = (35% + 18%) of 300x = 53% of 300x = 159x

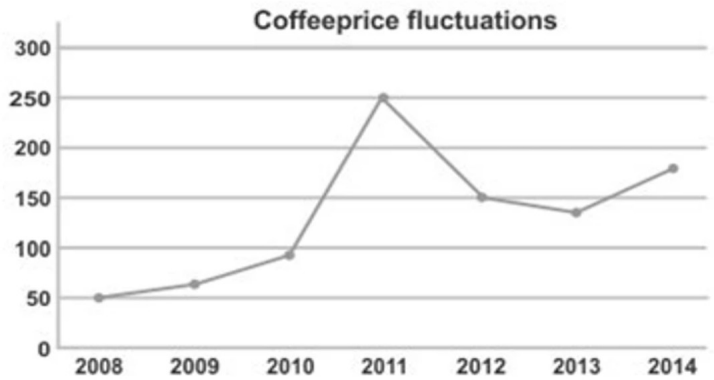
Total number of visitors of India Gate on Tuesday and Monday = (16% + 27%) of 400x = 43% of 400x = 172x

Required ratio = 159x : 172x = 159 : 172 (**Ans.**)

Question with more than Two Graphs

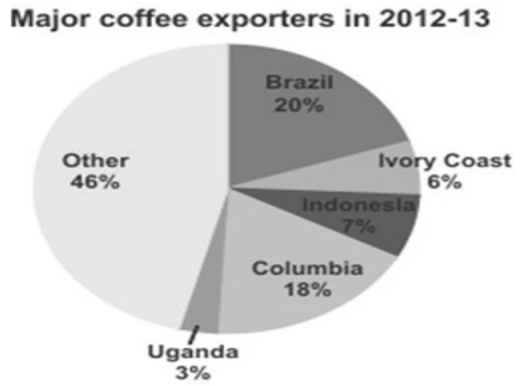
E.g. The line graph given below shoes the coffee price fluctuations from 2008 - 2014. The pie chart shows the percentage shares of major coffee exporters in the year 2012 - 2013. Further the bar graph shows the producers stocks during different years from 2008 - 2014. Refer to the data and answer the question that follow.

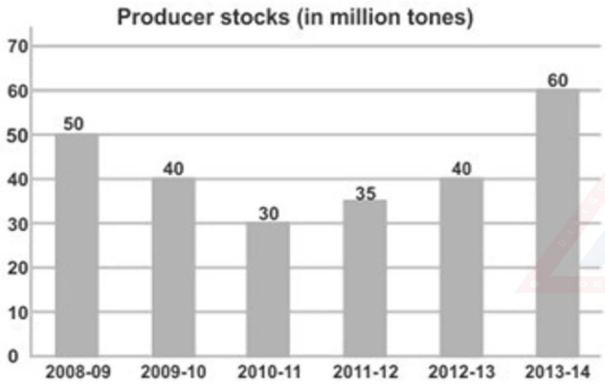
World coffee exports



Asutosh Mukherjee Road, College Para, Hathi More, Siliguri, West Bengal
+91 - 8436586516, +91-8436900456
thedhronas@gmail.com
thedronas.com

Basics of Data Interpretation (Part 3) for Bank Exams





(1) Coffee price showed the greatest increase between which of the following years?

(2) During which period was the value of coffee with producers highest?

Sol: (1) For identifying the greatest increase on a cartesian graph, find out the period where the slope of the curve is the steepest. Hence, coffee prices showed the greatest increase between 2010 and 2011. (**Ans.**)

(2) One might be misled by the number of stocks held. But the question deals with the value of stocks so held. It is easy to see that the prices of coffee were at a peak in 2011-12. The highest value of the stock has necessarily to be in the year 2011-12. (**Ans.**)

So, here you saw how the knowledge of percentage helps you in solving questions faster.

In summary, **Basics of Data Interpretation** is a crucial stepping stone for bank exam aspirants, offering advanced insights into quantitative analysis. With a comprehensive understanding of interpreting intricate data sets, you now possess a strategic advantage in tackling diverse challenges. As you approach the quantitative sections of bank exams, the expertise gained in this part becomes a cornerstone of your readiness.

Asutosh Mukherjee Road, College Para, Hathi More, Siliguri, West Bengal
+91 - 8436586516, +91-8436900456
thedhronas@gmail.com
thedronas.com

Apply these skills with confidence, knowing that your proficiency in handling complex data scenarios enhances your overall competence, positioning you for success in the dynamic and competitive realm of banking examinations. Best wishes on your journey to excellence!

Asutosh Mukherjee Road, College Para, Hathi More, Siliguri, West Bengal
+91 - 8436586516, +91-8436900456
thedhronas@gmail.com
thedronas.com