

DATA Interpretation Part 1

Data Interpretation



OnlineStudy4u

Placement for All. All for Placement

This Video Completely covers the problems on "Data Interpretation" which is more than sufficient for all kind of placement Exams eg: TCS/WIPRO/AMCAT/ELITMUS/CoCubes and all other placement Exams.

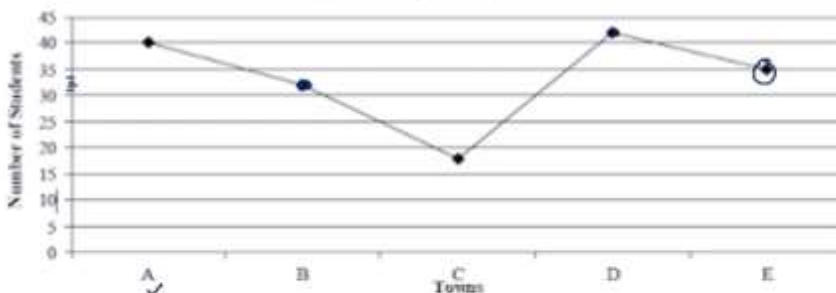
Data Interpretation by : Pratik Shrivastava (10 years of industry experience and best Aptitude trainer)

Data Interpretation:

✓ Tricks ✓

Directions: Study the following Graph carefully and answer the questions given below:

Number of Students Appearing for Aptitude Test from Various Towns (Number in thousands)



$$A = 40K, B = 32.5K, C = 17.5K$$

$$D = 42.5K, E = 35K$$

$$\text{Avg} = \frac{\text{Sum}}{\text{No.}}$$

$$\times 1000 \frac{40 + 32.5 + 17.5 + 42.5 + 35}{5}$$

$$\frac{167.5}{5} \times 1000 = 33500$$

1. What is the average number of students appearing for Aptitude test from all the Towns together?

- 1) 33500 2) 3350 3) 17500 4) 33.5 5) None of these

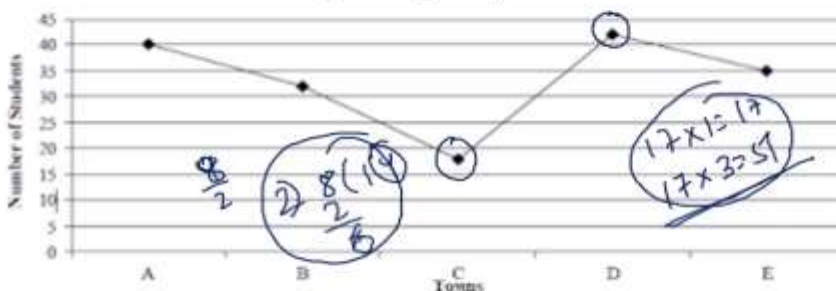
$$\text{Min} < \text{Avg} < \text{Max} \Rightarrow \frac{17.5K}{17500} < \text{Avg} < \frac{42.5K}{42500}$$

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Data Interpretation:

Directions: Study the following Graph carefully and answer the questions given below:

Number of Students Appearing for Aptitude Test from Various Towns (Number in thousands)



$$D = 42.5K, C = 17.5K$$

$$\Rightarrow \frac{\text{Town D}}{\text{Town C}} \times 100$$

$$\Rightarrow \left[\frac{42.5}{17.5} \times 100 \right]$$

Q2 The number of students appearing for the Aptitude test from Town D is approximately what percent of the number of students appearing for the Aptitude test from Town C?

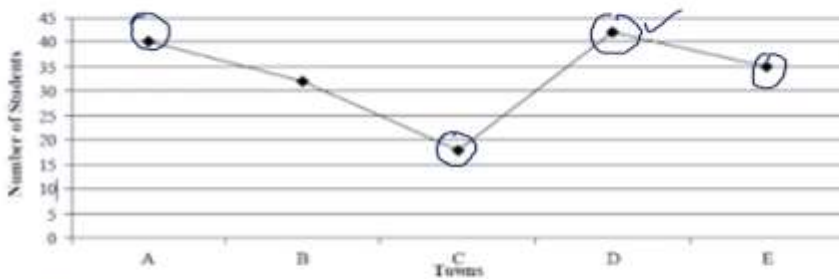
- 1) 243 2) 413 3) 134 4) 341 5) 143

Simplify.

Data Interpretation:

Directions: Study the following Graph carefully and answer the questions given below:

Number of Students Appearing for Aptitude Test from Various Towns (Number in thousands)



$$\Rightarrow (17.5K + 42.5K) : (40K + 42.5K + 35K)$$

$$\Rightarrow 60 : 117.5$$

$$20 : 39.17$$

$$20 : 39$$

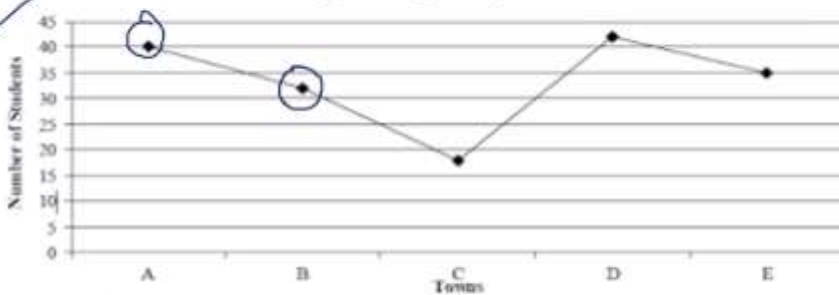
Q3 What is the respective ratio of the number of students appearing for the Aptitude test from Town C and D together to the number of students appearing for the Aptitude test from Town A, D and E together?

- 1) 20 : 41 2) 20 : 43 3) 20 : 39 4) 37 : 20 5) None of these

Data Interpretation:

Directions: Study the following Graph carefully and answer the questions given below:

Number of Students Appearing for Aptitude Test from Various Towns (Number in thousands)



$$\Rightarrow \text{Town B} : \text{Town A} \checkmark$$

$$32.5K : 40K$$

$$\Rightarrow 32.5 : 40$$

$$\Rightarrow \frac{32.5 \times 10}{40 \times 10}$$

$$\Rightarrow 325 : 400$$

$$\Rightarrow 65 : 80$$

$$\Rightarrow 13 : 16 \checkmark$$

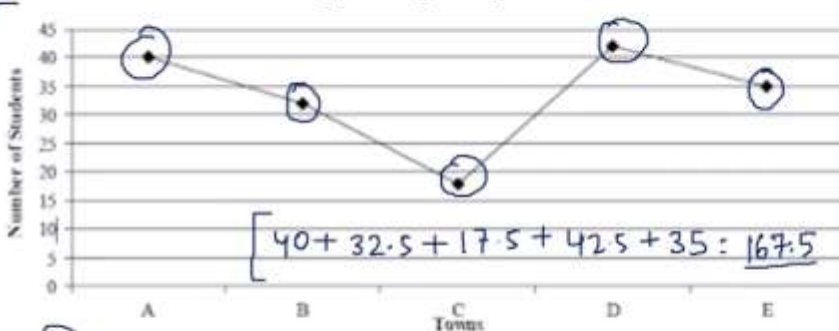
Q4 What is the respective ratio of the number of students appearing for the aptitude test from Town B to Town A?

- 1) 3 : 4 2) 13 : 16 3) 11 : 16 4) 2 : 3 5) None of these

Data Interpretation:

Directions: Study the following Graph carefully and answer the questions given below:

Number of Students Appearing for Aptitude Test from Various Towns (Number in thousands)



$$[40 + 32.5 + 17.5 + 42.5 + 35 = 167.5]$$

$$\frac{\text{Town E}}{\text{Town (A+B+C+D+E)}} \times 100$$

$$\Rightarrow \frac{35 \times 100}{167.5} = 20.9$$

$$\Rightarrow = 21$$

Q5 The number of students appearing for the aptitude test from Town E is approximately what percent of total number of students appearing for the Aptitude test from all the Towns together?

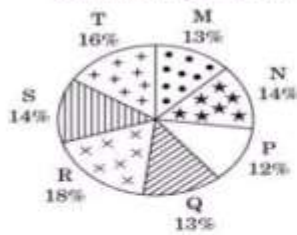
- 1) 18 2) 17 3) 19 4) 21 5) 23

$$\begin{array}{r} 167 \times 23 = 3841 \\ 167 \times (20+3) = 3340 + 501 \\ 167 \times 2 = 334 \end{array}$$

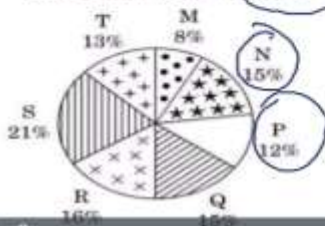
Common

Distribution of Students at Graduate and Post-Graduate levels in seven institutions

Total Number of Students of Graduate level = 27300



Total Number of Students of Post-Graduate level = 24700



Data Interpretation

$$24700 \times [15\% + 12\%]$$

$$24700 \times 27\% \Rightarrow 24700 \times \frac{27}{100}$$

\Rightarrow 9
unit/last digit

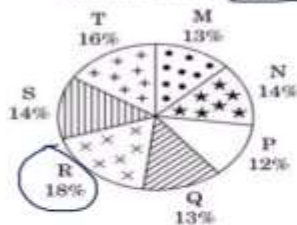
Total number of students studying at post-graduate level from institute N and P is

- (a) 5601 (b) 5944
(c) 6669 (d) 8372

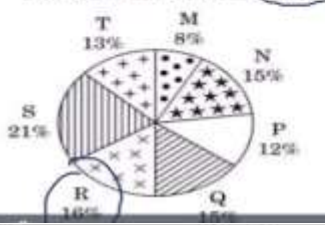
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Distribution of Students at Graduate and Post-Graduate levels in seven institutions

Total Number of Students of Graduate level = 27300



Total Number of Students of Post-Graduate level = 24700



Data Interpretation

[Simplification]

$$27300 \times 18\% + 24700 \times 16\%$$

$$\Rightarrow 18 \times 273 + 16 \times 247$$

$$\Rightarrow 18 \times (200 + 70 + 3) + 16 \times (200 + 40 + 7)$$

$$\Rightarrow 3600 + 1260 + 54 + 3200 + 640 + 112$$

$$\Rightarrow 8866$$

Q. What is the total number of graduate and post-graduate level students in institute

R?

- A. 8320 B. 7916 C. 8866 D. 8099

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Q. The following data relate to the monthly incomes of 125 families in a locality :

Income (in ₹)	No. of families
2000 - 4999 ✓	23
5000 - 7999 ✓	37
8000 - 10999 ✓	55
11000 - 13999	10

Total no of families = 125

$$\Rightarrow \frac{65}{125} \times 100 = 52\%$$

What percentage of families are earning more than ₹ 7999?

- (1) 50%
(2) 52%
(3) 54%
(4) 55%

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Data Interpretation

- Q.** **Directions (Questions no. 23 and 24) :** The following table gives the sales of batteries manufactured by a company over the years. Study the table and answer the questions that follow.

Number of Different Types of Batteries Sold by a Company Over The Years (Numbers in Thousands)						
Year	Types of Batteries					TOTAL
	4AH	7AH	32AH	35AH	55AH	
1992	75	144	114	102	108	543
1993	90	126	102	84	126	528
1994	96	114	75	105	135	525
1995	105	90	150	90	75	510
1996	90	75	135	75	90	465
1997	105	60	165	45	120	495
1998	115	85	160	100	145	605

In which type of battery was there a continuous decrease in sales from 1992 to 1997?

- (1) 4AH
(2) 7AH
(3) 32AH
(4) 35AH

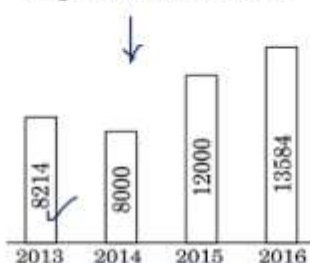
Exports and Imports data of a country

Q.

Exports (in crores)



Imports (in crores)



26. What was the approximate difference between the average imports and average exports over the given years (2013 to 2016)?

- (1) 362 crores
(2) 380 crores
(3) 350 crores
(4) None of these

[last/unit]

Average import - Average export

$$\frac{\text{Sum I}}{\text{NO}} - \frac{\text{Sum E}}{\text{NO}}$$

$$= \frac{8214 + 8000 + 12000 + 13584}{4}$$

$$- \frac{7613 + 9715 + 11022 + 12000}{4}$$

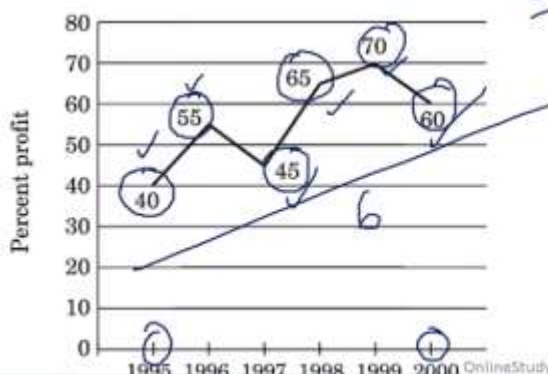
Trick

$$= \frac{8}{4} - \frac{0}{4} = 2 \text{ last/unit}$$

- A.** **Directions (Questions no. 32 to 34) :** The following line-graph gives the annual percent profit earned by a company during the period 1995 - 2000. Study the line-graph and answer the following questions based on it.

$$\% \text{ Profit} = \frac{\text{Income} - \text{Expenditure}}{\text{Expenditure}} \times 100$$

Percent profit earned by a company over the years



Data Interpretation

Average Ratio

$$\text{Average: } \frac{\text{Sum}}{\text{NO}}$$

$$= \frac{40 + 55 + 45 + 65 + 70 + 60}{6} = \frac{335}{6} = 55.83$$

What is the average of percentage profit earned for the given years (from 1995 to 2000)?

- (1) 50-66
(2) 55-83
(3) 60-17
(4) 33-5

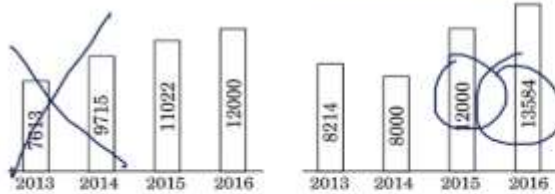
Data Interpretation

- Q. Directions (Questions no. 26 and 27) :**
Study the following graphs carefully and answer the questions given below them.

Exports and Imports data of a country

Exports (in crores)

Imports (in crores)



What was the approximate percentage increase in the imports from 2015 to 2016?

(1) 10%

(2) 15%

(3) 11%

(4) 13%

Base

$$\frac{13584 - 12000}{12000} \times 100 = \frac{1584}{12000} \times 100 = 13.2\%$$

2015
12000 Crores

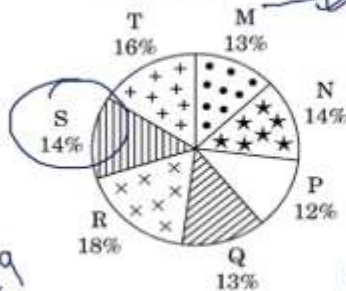
2016
13584 Crores

$$\frac{132}{396} \times \frac{1584}{12000} \times 100 = 13.2\%$$

Data Interpretation

- Q. Distribution of Students at Graduate and Post-Graduate levels in seven institutions**

Total Number of Students of Graduate level = 27300

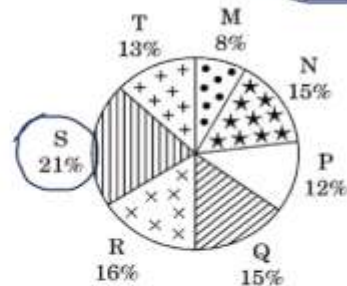


improve calculation

$$13) 247(19 \\ \underline{13} \\ 117 \\ \underline{117} \\ 0$$

$$PG_S : G_S = 24700 \times 21 : 27300 \times 14 = 91 : 382 \\ \Rightarrow 19 : 14$$

Total Number of Students of Post-Graduate level = 24700



Ratio

What is the ratio between the number of students studying at post-graduate and graduate levels respectively from institute S?

(1) 14 : 19

(2) 19 : 21

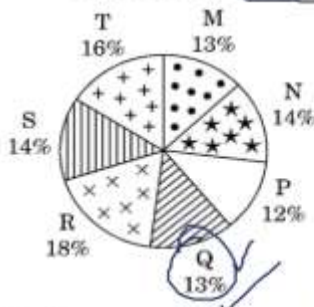
(3) 17 : 21

(4) 19 : 14

Data Interpretation

- Q. Distribution of Students at Graduate and Post-Graduate levels in seven institutions**

Total Number of Students of Graduate level = 27300

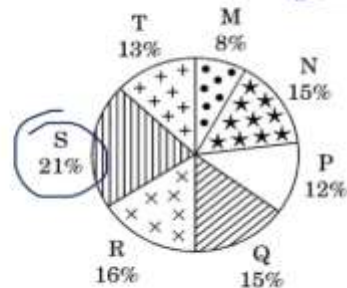


$$21) 273(13 \\ \underline{21} \\ 63$$

$$PG_S : G_Q$$

$$19) 24700 \times 21 : 27300 \times 13 = 91 : 357 = 19 : 13$$

Total Number of Students of Post-Graduate level = 24700



What is the ratio between the number of students studying at post-graduate level from institute S and the number of students studying at graduate level from institute Q?

(1) 13 : 19

(2) 19 : 13

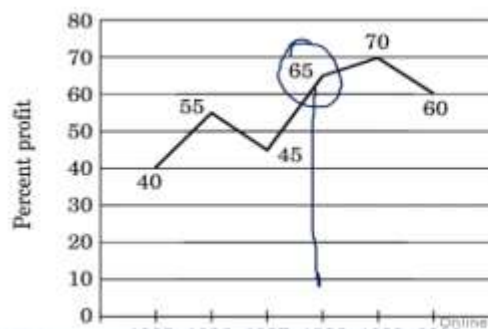
(3) 21 : 13

(4) 13 : 18

Directions (Questions no. 32 to 34) : The following line-graph gives the annual percent profit earned by a company during the period 1995 - 2000. Study the line-graph and answer the following questions based on it.

$$\% \text{ Profit} = \frac{\text{Income} - \text{Expenditure}}{\text{Expenditure}} \times 100$$

Percent profit earned by a company over the years



Data Interpretation

If the income in 1998 was ₹ 264 crores, what was the expenditure in 1998 ?

- (1) ₹ 104 crores
- (2) ₹ 145 crores
- (3) ₹ 160 crores
- (4) ₹ 185 crores

$$1998 \text{ I} = 264 \text{ crore}$$

$$E = ? , \therefore \text{Profit} = 65\%$$

$$\therefore \text{Profit} = \left(\frac{I - E}{E} \right) \times 100$$

$$65 \times E = (264 - E) \times 100$$

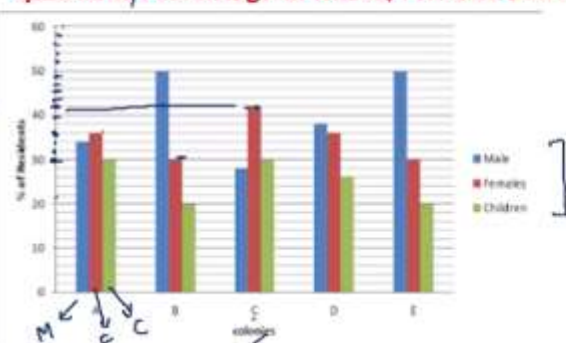
$$65E = 26400 - 100E$$

$$165E = 26400$$

$$E = 26400 / 165 \Rightarrow 160 \text{ crore}$$

Data Interpretation:

Directions : (Q. 1-5) Study the following graph and table carefully and answer the given questions, Percentage of Males, Females and Children Living in Various Colonies



Total number of residents in various colonies	
A	1250
B	2050
C	1800
D	1150
E	1620

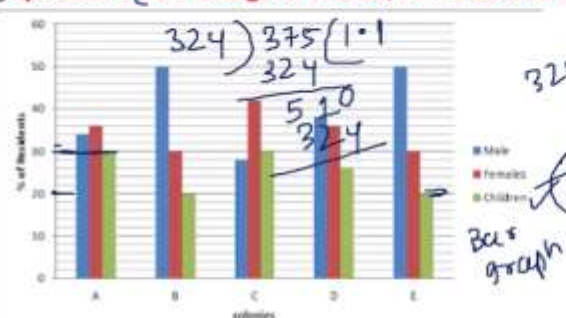
1. What is the total number of females in Colonies A, B and C together?

- (1) 1785
- (2) 1821
- (3) 1479
- (4) 1692
- (5) None of these

$$25 \times 1250 \times \frac{35}{100} + 30 \times 2050 \times \frac{30}{100} + 42 \times 1800 \times \frac{30}{100} \Rightarrow 1031.25 + 1830 + 2268 = 5129.25$$

Data Interpretation:

Directions : (Q. 1-5) Study the following graph and table carefully and answer the given questions, Percentage of Males, Females and Children Living in Various Colonies



Total number of residents in various colonies	
A	1250
B	2050
C	1800
D	1150
E	1620

2. The number of children in Colony A are approximately what per cent of the number of children in Colony E?

- (1) 121
- (2) 116
- (3) 75
- (4) 105
- (5) 98

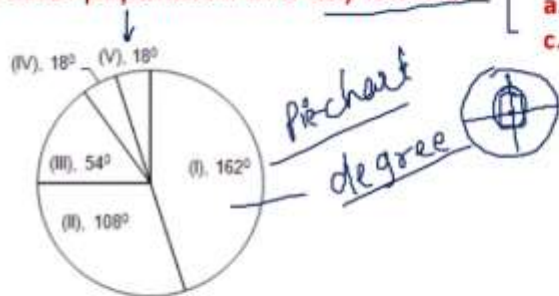
$$324 \times 121 (100 + 20 + 1)$$

$$\frac{125 \times 30}{162 \times 20} \times 100 = \frac{375}{324} \times 100 \approx 115.74 \approx 116$$

Data Interpretation

- ✓ The various sections of the population are indicated below in the pie-chart. Study the pie-chart and answer the following questions:

The total population of a city is 5000



Q1. What percentage of the employed persons is self employed?

- a. 5% **b. 55/19%**
c. 19% d. 20%

Total population = 5000 ✓

Total: 360° ✓

Total Employed: $360^\circ - 18^\circ = 342^\circ$ ✓

Self employed = 18°

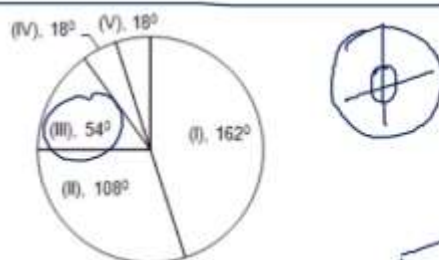
1. Employees of the Public Sector ✓
II. Employees of the Private Sector ✓
III. Employees of the Corporate Sector ✓
IV. Self-Employed ✓
V. Unemployed ✓

$$\frac{100}{19} \left[\frac{18^\circ}{342^\circ} \times 100 \right] = \frac{55}{19}\%$$

Data Interpretation

The various sections of the population are indicated below in the pie-chart. Study the pie-chart and answer the following questions:

The total population of a city is 5000



Q2. Number of persons employed in the Corporate Sector

- a. 250 b. 500
c. **750** d. 1500

Corporate sector employees = 54° ✓

Basic: $360^\circ = 100\%$ ✓

$$100\% = 5000$$

$$1^\circ = \frac{100}{360}$$

$$54^\circ = \frac{100}{360} \times 54^\circ \rightarrow \frac{5000}{360} \times 54 = 750$$

1. Employees of the Public Sector
II. Employees of the Private Sector
✓ III. Employees of the Corporate Sector
IV. Self-Employed
V. Unemployed