

Tabular Data

Data Interpretation: can be defined as "the application of statistical procedures to analyze specific observed or assumed facts from a particular study" and includes Tabular graph, pie graph, net graph, bar graphs etc,

Tabular Data Interpretation

Example:

BREAK UP OF GDP
1990 and 2000 (in millions of US Dollars)

Component	1990 (at 1990 prices)	2000 (at 2000 prices)
Consumption Expenditure	100	288
Business Investment	35	125
Government Expenditure	27	55
Exports Net Of Imports	18	12
GDP	180	480

In 2000, prices were 1.5 times prices in 1990

1. In terms of prices of 2000, by what percentage has the GDP of the country increased since 1990?

- A. 166.67%
- B. 66.67%
- C. 77%
- D. 72.5% 5. 80.25%

Answer :C

Explanation : GDP in 1990=\$180 mn. GDP in 2000=\$480 mn.in 2000 prices = $\$(480/1.5)$ mn = \$320mn in 1990 prices. Increase = $\$(320-180)$ mn=\$140mn. The % increase in 1990 prices = $(100/180) \times 140 = 77.78\%$ Approximately it is 77.%.

2. In terms of prices of 1990, what is the approximate percentage increase in Business Investment from 1990 to 2000?

- A. 40%
- B. 140%
- C. 250%

D. 125% 5. 100%

Answer :B

Explanation : Business investment in 1990=\$35 mn. Business investment in 2000=\$125 mn.in 2000 prices = $\$(125/1.5)mn = \$83.3mn$ in 1990 prices. Increase = $\$(83.3-35)mn=\$49.8mn$. It is approximately \$50mn. The % increase in 1990 prices = $(100/35) \times 50 = 143\%$. Approximately it is 140%.

Exercise Questions

Directions for Questions 1 to 4: Answer the questions on the basis of the information given below.

The Dean's office recently scanned student results into the central computer system. When their character reading software cannot read something, it leaves that space blank. The scanner output reads as follows:

Name	Finance	Marketing	Statistics	Strategy	Operations	GPA
Aparna		B	F			1.4
Bikas	D	D	F	F		
Chandra		D	A	F	F	2.4
Deepak	A	B		D	D	3.2
Fazal	D	F	B		D	2.4
Gowri	C	C	A		B	3.8
Hari		B	A		D	2.8
Ismet			B		A	
Jagdeep	A	A	B		C	3.8
Kunal	F		A	F	F	1.8
Leena	B	A		B	F	3.2
Manab			A	B	B	
Nisha	A	D	B	A	F	3.6
Osman	C		B	B	A	4.6
Preeti	F	D		D		3.2
Rahul	A	C	A		F	4.2
Sameer		C	F	B		
Tara	B					2.4
Urkarsh			F	C	A	3.0
Vipul	A		C	C	F	2.4

In the grading system, A, B, C, D, and F grades fetch 6, 4,3,2, and 0 grade points respectively. The Grade Point Average (GPA) is the arithmetic mean of the grade points obtained in the five

subjects. For example Nisha's GPA is $(6 + 2 + 4 + 6 + 0) / 5 = 3.6$. Some additional facts are also known about the students' grades. These are

- a. Vipul obtained the same grade in Marketing as Aparna obtained in Finance and Strategy.
- b. Fazal obtained the same grade in Strategy as Utkarsh did in Marketing.
- c. Tara received the same grade in exactly three courses.

1. What grade did Preeti obtain in Statistics?

- a. A
- b. B
- c. C
- d. D

2. In Operations, Tara could have received the same grade as

- a. Ismet
- b. Hari
- c. Jagdeep
- d. Manab

3. What grade did Utkarsh obtain in Finance?

- a. B
- b. C
- c. D
- d. F

4. In Strategy, Gowri's grade point was higher than that obtained by

- a. Fazal
- b. Hari

- c.Nisha
- d.Rahul

Directions for Questions 5 to 8: Answer the questions on the basis of the information given below.

The year was 2006. All six teams in Pool A of World Cup hockey play each other exactly once. Each win earns a team three points, a draw earns one point and a loss earns zero points. The two teams with the highest points qualify for the semifinals. In case of a tie, the team with the highest goal difference (Goal For -Goals Against) qualifies.

In the opening match, Spain lost to Germany. After the second round (after each team played two matches), the pool table looked as shown below.

Pool A

Teams	Game played	Won	Drawn	Lost	Goals For	Goals Against	Points
Germany	2	2	0	0	3	1	6
Argentina	2	2	0	0	2	0	6
Spain	2	1	0	1	5	2	3
Pakistan	2	1	0	1	2	1	3
New Zealand	2	0	0	2	1	6	0
South Africa	2	0	0	2	1	4	0

In the third round, Spain played Pakistan, Argentina played Germany, and New Zealand played South Africa. All the third round matches were drawn. The following are some results from the fourth and fifth round matches

- (i) Spain won both the fourth and fifth round matches.
- (ii) Both Argentina and Germany won their fifth round matches by 3 goals to 0.
- (iii) Pakistan won both the fourth and fifth round matches by 1 goal to 0.

5. Which one of the following statements is true about matches played in the first two rounds?

- a. Germany beat New Zealand by 1 goal to 0.
- b. Spain beat New Zealand by 4 goals to 0.
- c. Spain beat South Africa by 2 goals to 0.
- d. Germany beat South Africa by 2 goals to 1

6. Which one of the following statements is true about matches played in the first two rounds?

- a. Pakistan beat South Africa by 2 goals to 0.
- b. Argentina beat Pakistan by 1 goal to 0.
- c. Germany beat Pakistan by 2 goals to 1.
- d. Germany beat Spain by 2 goals to 1.

7. Which team finished at the top of the pool after five rounds of matches?

- a. Argentina
- b. Germany
- c. Spain
- d. Cannot be determined from the data

8. If Pakistan qualified as one of the two teams from Pool A, which was the other team that qualified?

- a. Argentina
- b. Germany
- c. Spain
- d. Cannot be determined from the data

Answer Keys

1. a; 2.b; 3.c; 4. b; 5.d; 6.b; 7.d; 8.b

Exercise Questions

I. Directions (1-5) These questions are to be answered on the basis of the following table giving the bank rates for 100 units of various foreign currencies converted to Indian rupees.

<u>S.No</u>	<u>Currencies</u>	<u>Selling (Rs.)</u>	<u>Buying (Rs.)</u>
1	Pound Sterling	4759	4723
2	US Dollar \$	3152	3120
3	Deutsche Mark	1880	1833
4	Swiss Franc	2123	2060
5	French Franc	558	543
6	Swedish Kroner	414	397
7	Japanese Yen	29.70	29.00
8	Australian Dollar	2133	2080
9	U.A.E. Dirham	858	849

1. For how many currencies is the difference between buying and selling rates (per 100 units) more than Rs. 35?

- a.2
- b.3
- c.4
- d.5

2. For which foreign currency is the difference between the rates for buying and selling approximately equivalent to the buying rate of one unit of that currency?

- a. Deutsche Mark
- b. US Dollar
- c. Swiss Franc
- d. Swedish Kroner

3. A man wants to convert Rs. 10,000 into foreign currency. He wants to buy the foreign currency which gives him the maximum number of units. Which currency should he buy?

- a. Pound Sterling
- b. U.A.E. Dirham

c. Japanese Yen

d. French Franc

4. What is the approximate ratio of the buying rate of Australian Dollar of that to the U.S. Dollar?

a.15

b.1.02

c.1.09

d.0.67

5. If the bank buys 100 Pounds Sterling and 200 U.A.E. Dirham, how much money in rupees is given to the seller of the foreign currency?

a. Rs. 3,382

b. Rs. 6,421

c. Rs. 4,621

d. Rs. 6,382

II. For questions (6–10) Refer to the table below and answer the questions that follow.

The Internet is spreading its wings at a very fast pace and along with it, the software business resulting from the net is also growing. The table below provides a breakdown of the growth of the internet software market.

ESTIMATED INTERNET SOFTWARE MARKET REVENUE
BREAKDOWN (in \$ million)

Type of software	1997	1998	1999	2000
Servers	235.9	635.8	1449.1	2633.9
Browsers	48.7	68.2	95.5	133.7
Authoring	13.5	46.9	134.8	287.5
Retrieval	43.5	82	156.9	245.6

6. Which of the markets is expected to show maximum compounded annual growth rate(CAGR) growth from 1997 to 2000?
- Server
 - Browsers
 - Authoring
 - Retrieval
7. What is the approximate CAGR rate at which total internet software market is expected to grow between 1997 and 2000?
- 50%
 - 110%
 - 160%
 - 200%
8. How much business will be contributed by Browsers in percentage terms over the four year period?
- 4
 - 5.5
 - 4.5
 - 9
9. Which software has minimum growth over the period of four years?
- Server

b. Browser

c. Authoring

d. Retrieval

10. How much business will be generated by servers and retrieval in percentage terms over the four years period?

a. 86.9%

b. 81%

c. 76%

d. 93.2%

Answer & Explanations

I. 1. For four currencies Pound Sterling, Deutsche Mark, Swiss Franc and Australian Dollar it is more than 35.

2. For US Dollar difference between buying and selling rates = $(3152 - 3120)$

= 32. Buying rate per unit = 31.20 » 32

3. (c)

4. Required ratio = $2080/3120 = 208//312 = 0.67$

5. Buying price for 100 Pound Sterling = Rs. 4723

Buying price for 200 UAE = $Rs. 2 * 849 = Rs. 1698$

Therefore, Required money = $(4723 + 1698) = Rs. 6421$

II. Exp. As a first step we will construct the following table

Type of S/W	1997	1998	1999	2000
Server	235.9	635.8	1449.1	2633.9
Browser	48.7	68.2	95.5	133.7
Authoring	13.5	46.9	134.8	287.5
Retrieval	43.5	82.0	156.9	245.6
Total	341.6	832.9	1836.3	3300.7

Type of S/W	Sales in 2000/sales in 1997	Total
Server	11.16	4954.7
Browser	2.74	346.1
Authoring	21.29	482.7
Retrieval	5.64	528.0
Total	9.66	6311.5

6. It is difficult to find CAGR, so instead of this, we can find which market has grown the most. From the table, we see that Authoring will grow maximum.

7. CAGR rate = $[\text{Total sales in 2000}/\text{Total sales in 1997}]^{1/3} - 1$

$$= [3301/342]^{1/3} - 1 = (9.65)^{1/3} - 1, \quad 9.66 < (2.5)^3$$

Hence, CAGR < 1.5. Hence (b)

8. Percentage of business contributed by Browsers = $346.1 * 100 / 6311.5 @ 5.5\%$
Hence (b)

9. From table, minimum growth will be by Browsers. Hence (b)

10. Business contribution by servers and retrievals = 4954.7+528.0 @ 86.9%

6311.5

Hence (a)