



Tables: Introduction & Solved Examples

What is a Table?

A Table is a set of data arranged in **rows and columns** and is one of the most common ways of putting information across to people.

Column 1	Column 2	Column 3
Row 1	Row 1	Row 1
Row 2	Row 2	Row 2
Row 3	Row 3	Row 3

A table consists of **several boxes** with information inside.

The first row and the first column are generally used to denote the titles or headings. While any type of data can be presented in table form, interpreting the data in a table is sometimes more **difficult and time-consuming** than reading pictorial or graphical presentations.

Tables give **values that are organised but not represented visually**; you can convert table data into graphs to compare quantities and see trends.

You may **graph the data from the table** to compare and see trends. You may also create a table from a graph to make calculations easier.

MULTIPLE CHOICE QUESTION

Try yourself: What is the main purpose of using a table to present data?

A To visually represent information

B To organize data in rows and columns

C To make calculations easier

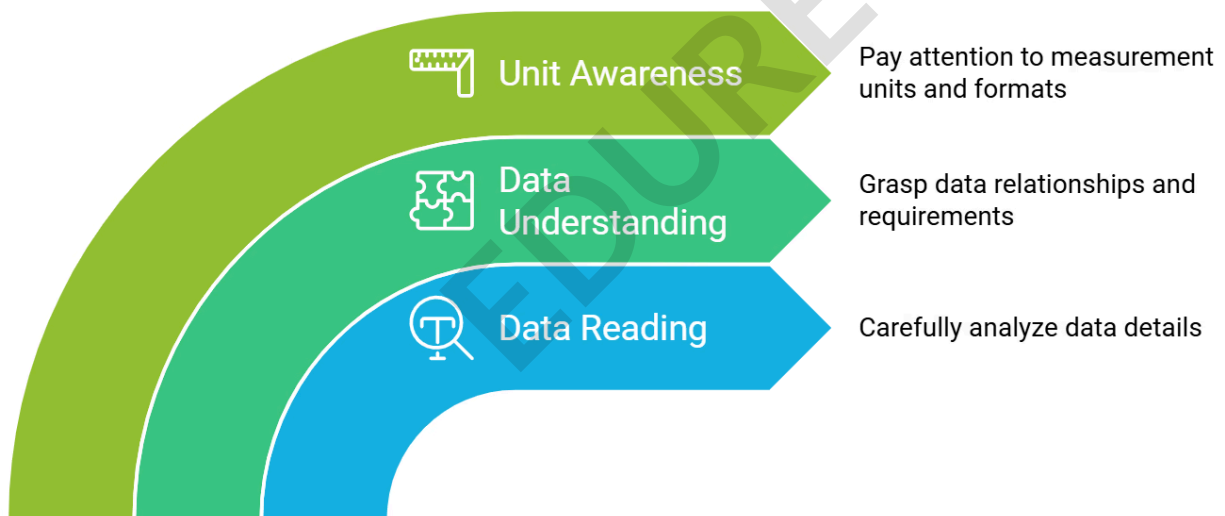
D To compare and see trends in data

View Solution

Tips on Solving Table / Chart Problems

1. **Read the data very carefully.** The smallest detail, such as a unit or a note, may change the question's meaning completely. Read the instructions to avoid calculating unnecessary values.
2. **Understand the data.** Before attempting answers, understand what each row and column represents. Questions are often designed to be **deceptive**. If there are multiple tables, try to understand the relation between them. For example, one table may give absolute sales while another gives sales as a percentage of production; some questions will need both.
3. **Be careful of units.** Notice the units used in the table and in the answer choices. A mistake in units (lakh, crore, thousands, percent, months) can give a different answer. Also check whether the answer should be in decimal or percentage.

Mastering Table Chart Problems



Let's look at some Examples

Example 1

Questions 1-4 are based on the table below, which is a record of the performance of a baseball team for the first seven weeks of the season.

Week	Games Won	Games Lost	Total No. of Games Played
First Week	5	3	8
Second Week	4	4	16
Third Week	5	2	23
Fourth Week	6	3	32
Fifth Week	4	2	38
Sixth Week	3	3	44
Seventh Week	2	4	50

Q.1.1: How many games did the team win during the first seven weeks?

(A) 2

(B) 21

(C) 29

(D) 50

(E) 58

Answer: C

Solution:

To find the total number of games won, add the number of games won for all the weeks.

$$5 + 4 + 5 + 6 + 4 + 3 + 2 = 29$$

The correct answer is choice (C).

Q.1.2: What percent of the games did the team win?

(A) 21%

(B) 29%

(C) 42%

(D) 58%

(E) 72%

Answer: D

Solution:

Across all seven weeks the team played 50 games (sum of totals) and won 29 of them.

$$\text{Win percentage} = \frac{\text{Number of wins}}{\text{Total games}} \times 100 = \frac{29}{50} \times 100\%$$

$$\frac{29}{50} \times 100\% = 58\%$$

The correct answer is choice (D).

Q.1.3: Which week was the worst for the team?

(A) Second week

(B) Fourth week

(C) Fifth week

(D) Sixth week

(E) Seventh week

Answer: E

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Solution:

We compare the win rate (wins divided by total games) for each week to find the smallest percentage.

First week: won 5 of 8 games.

$$\frac{5}{8} = 0.625 = 62.5\%$$

Second week: won 4 of 16 games.

$$\frac{4}{16} = 0.25 = 25\%$$

Third week: won 5 of 23 games.

$$\frac{5}{23} \approx 0.217 = 21.7\%$$

Fourth week: won 6 of 32 games.

$$\frac{6}{32} = 0.1875 = 18.75\%$$

Fifth week: won 4 of 38 games.

$$\frac{4}{38} \approx 0.1053 = 10.53\%$$

Sixth week: won 3 of 44 games.

$$\frac{3}{44} \approx 0.0682 = 6.82\%$$

Seventh week: won 2 of 50 games.

$$\frac{2}{50} = 0.04 = 4\%$$

Since 4% is the lowest win rate, the **seventh week** was the worst for the team.

Answer: (E) Seventh week

Q.1.4: Which week was the best week for the team?

- (A) first week
- (B) third week
- (C) fourth week
- (D) fifth week
- (E) sixth week

Answer: B

Solution:

We can compare either the ratio wins : losses or the percentage of games won each week to find the highest value.

Method 1 - compare wins to losses:

$$\text{Week 1: } \frac{5}{3} \approx 1.67$$

$$\text{Week 3: } \frac{5}{2} = 2.5$$

$$\text{Week 4: } \frac{6}{3} = 2$$

$$\text{Week 5: } \frac{4}{2} = 2$$

The largest ratio is for the third week: 2.5.

Method 2 - compare win percentages:

$$\frac{5}{8} = 62.5\%$$

$$\frac{5}{7} \approx 71.43\%$$

$$\frac{6}{9} \approx 66.67\%$$

$$\frac{4}{6} \approx 66.67\%$$

The third week (approximately 71.43%) is the best.

The correct answer is choice (B).

Example 2

Here is an example consisting of tabular data:

Category of Assistance	Average number receiving per month		Total cost per help year (in crores of Rs.)		Cost paid by Centre for the year (in crores of Rs.)	
	1995	1996	1995	1996	1995	1996
A	36097	38263	38.4	34.8	18.4	17.4
B	6632	5972	5.0	3.2	2.6	1.6
C	32545	31804	76.4	59.4	13.0	10.0
D	13992	11782	26.4	42.6	6.6	10.6
E	21275	228795	216.6	242.8	55.0	62.6

Q. 2.1: The category receiving the least percentage help from the centre (in the entire data) is:

- (A) Category B in 1995
- (B) Category C in 1996
- (C) Category B in 1996
- (D) Category D in 1995

Correct Answer is Option (B).

For such questions it is often faster to evaluate the given options rather than scanning every cell to find the minimum.

Compute the percentages for the alternatives mentioned:

(A) Category B in 1995 = $\frac{2.6}{5.0} \times 100 = 52\%$ (Even without calculation, you can eliminate this choice.)

(B) Category C in 1996 = $\frac{10.0}{59.4} \times 100 = 16.8\%$

Option (C) Category B in 1996 can be eliminated at once by observation.

Option (D) Category D in 1995 evaluates to a larger percentage than (B).

Conclusion: Option (B) is the least percentage.

$$\frac{1.6}{3.2} \times 100 = 50\%$$

$$\frac{6.6}{26.4} \times 100 = 25.0\%$$

Q. 2.2: The difference between the average costs paid by the Centre during 1995 and 1996 is:

(A) Rs. 6600 lakh

(B) Rs. 132 crore

(C) Rs. 132 lakh

(D) Rs. 13.2 lakh

Correct Answer is Option (C).

Add the cost figures in the 1995 column:

$$18.4 + 2.6 + 13.0 + 6.6 + 55.0 = 95.6$$

Average in 1995:

$$\frac{95.6}{5} = 19.12 \text{ (crore)}$$

Add the cost figures in the 1996 column:

$$17.4 + 1.6 + 10.0 + 10.6 + 62.6 = 102.2$$

Average in 1996:

$$\frac{102.2}{5} = 20.44 \text{ (crore)}$$

The difference:

$$20.44 - 19.12 = 1.32 \text{ crore} = 132 \text{ lakh}$$

Q. 2.3: The Monthly cost to the city receiving E category assistance in 1996 is most nearly:

- (A) Rs. 1.8 crore less than that in 1995**
- (B) Rs. 2.1 crore more than that in 1995**
- (C) Rs. 2.1 crore less than that in 1995**
- (D) Rs. 1.8 crore more than that in 1995**

Correct Answer is Option (B).

Compute monthly cost for category E by dividing total assistance by 12 for each year.

For 1995:

$$\frac{216.6}{12} = 18.05 \text{ (crore per month)}$$

For 1996:

$$\frac{242.8}{12} \approx 20.2333 \text{ (crore per month)}$$

Difference:

$$20.2333 - 18.05 \approx 2.18 \text{ crore}$$

So Option (B) is the correct answer.

Q. 2.4: Monthly costs to the city of category D during 1995 and 1996 bear a ratio (most nearly):

- (A) 2 : 3
- (B) 5 : 3
- (C) 3 : 2
- (D) 3 : 5

Correct Answer is Option (D).

We can use the total assistance figures directly (since monthly division by 12 cancels in a ratio).

From the table: total assistance in 1995 for Category D is 26.4 and in 1996 is 42.6.

$$26.4 : 42.6 \approx 3 : 5$$

Example 3

Directions: Study the table carefully to answer the following questions.

Percentage of Marks obtained by Different students in Different subjects

Students	Subjects							
	Hindi (150)	English (150)	Math (150)	S.Sc. (125)	Physics (75)	Chemistry (75)	Biology (75)	Sanskrit (50)
Ankit	60	64	67	59	70	65	68	70
Bakul	75	95	92	87	84	74	90	77
Chaitanya	93	71	76	74	79	62	64	82
Deepali	66	56	70	66	71	64	72	58
Gauri	62	75	62	88	78	80	74	64
Himani	58	60	64	54	70	60	72	66

Q. 3.1: How many marks did Himani get in all the subjects together?

- A. 505
- B. 496
- C. 525
- D. 601
- E. None of these

Correct Answer is Option (C)

Solution:

Convert each percentage to actual marks using the maximum marks for that subject and add them.

$$\begin{aligned}
 \text{Required number} &= \frac{58 \times 150}{100} + \frac{60 \times 150}{100} + \frac{64 \times 150}{100} + \frac{54 \times 125}{100} + \frac{70 \times 75}{100} + \frac{60 \times 75}{100} \\
 &= 87 + 90 + 96 + 67.5 + 52.5 + 45 + 54 + 33 = 525
 \end{aligned}$$

Q. 3.2: What are the average marks obtained by all students together in Physics?

- A. 75.33
- B. 56.5
- C. 64.25
- D. 48.88
- E. None of these

Correct Answer is Option (B)

Compute the average from total marks and total students as given in the table.

$$\text{Average} = \frac{452 \times 75}{100} \times \frac{1}{6} = 56.5$$

Q. 3.3: How many students have scored the highest marks in more than one subject?

A. Three

B. Two

C. One

D. None

E. None of these

Correct Answer is Option (A)

Bakul, Chaitanya, and Gauri scored the highest marks in more than one subject.

Q. 3.4: Marks obtained by Ankita in Sanskrit is what percent of marks obtained by Gauri in the same subject? (rounded off to two digits after decimal)

A. 91.43

B. 94.29

C. 103.13

D. 109.38

E. None of these

Correct Answer is Option (D)

Compute the percentage:

$$\text{Required percentage} = \frac{70}{64} \times 100 = 109.375\%$$

Rounded to two digits:

$$109.38\%$$

Q. 3.5: Who has scored the highest marks in all the subjects together?

A. Chaitanya

B. Himani

C. Deepali

D. Gauri

E. None of those.

Correct Answer is Option (E)

Compute totals for each student:

$$\text{Ankita} = 90 + 96 + 100.5 + 73.75 + 52.5 + 48.75 + 51 + 35 = 547.5$$

$$\text{Bakul} = 726.25$$

$$\text{Chaitanya} = 647.25$$

$$\text{Deepali} = 554.75$$

$$\text{Gauri} = 614.5$$

$$\text{Himani} = 525$$

Bakul scored the highest total marks.

Example 4

Directions: Answer the questions based on the information given below.

The given table shows the data regarding the number of air conditioners and air coolers sold by a shop in 5 different months and also the percentage of those installed.

	Number of air conditioners sold	Percentage installed out of total air conditioners sold	Number of air coolers sold	Percentage of installed out of total air coolers sold
March	$2x$	80%	$3x + 90$	$(100/3)\%$
April	$2x + 400$	100%	$2x - 100$	80%
May	$2x + 600$	50%	$4x - 800$	75%
June	$2.5x$	80%	$1.5x$	100%
July	$x + 100$	90%	$2x + 400$	80%

If total number of air conditioners installed in all the months together is 1540 units, then find out the number of air coolers installed in the month of June.

A - 120

B - 170

C - 140

D - 210

E - 150

Solution

Let x be the base number used in the table (as described by the table's variables). Calculate installed units month by month, starting with March as shown.

In March, Number of air conditioners installed = $2x \times 0.8 = 1.6x$

Number of air coolers installed = $(3x + 90) \times \frac{1}{3} = x + 30$

Similarly, compute installed numbers for other months and sum the air conditioners installed:

	Number of air conditioners sold	Number of air conditioners installed	Number of air coolers sold	Number of air coolers installed
March	$2x$	$1.6x$	$3x + 90$	$x + 300$
April	$2x + 400$	$2x + 400$	$2x - 100$	$1.6x - 80$
May	$2x + 600$	$x + 300$	$4x - 800$	$3x - 600$
June	$2.5x$	$2x$	$1.5x$	$1.5x$
July	$x + 100$	$0.9x + 90$	$2x + 400$	$1.6x + 320$

Total number of air conditioners installed in all months =

$$1.6x + (2x + 400) + (x + 300) + 2x + (0.9x + 90) = 7.5x + 790$$

According to the question,

$$7.5x + 790 = 1540$$

$$7.5x = 750$$

$$x = 100$$

Number of air coolers installed in the month of June = $1.5 \times 100 = 150$

Hence, option E.

Example 5

Directions: Answer the questions based on the information given below.

The given table shows the data regarding the number of air conditioners and air coolers sold by a shop in 5 different months and also percentage of those installed.

	Number of air conditioners sold	Percentage installed out of total air conditioners sold	Number of air coolers sold	Percentage of installed out of total air coolers sold
March	$2x$	80%	$3x + 90$	$(100/3)\%$
April	$2x + 400$	100%	$2x - 100$	80%
May	$2x + 600$	50%	$4x - 800$	75%
June	$2.5x$	80%	$1.5x$	100%
July	$x + 100$	90%	$2x + 400$	80%

Find the difference between number of air conditioners installed in April and June together and the number of air coolers installed in March and May together.

A - Can't be determined

B - 970

C - 870

D - 210

E - 530

Solution

Use the same variable x as in the previous example and compute installed numbers.

In March, air conditioners installed = $2x \times 0.8 = 1.6x$

In March, air coolers installed = $(3x + 90) \times \frac{1}{3} = x + 30$

	Number of air conditioners sold	Number of air conditioners installed	Number of air coolers sold	Number of air coolers installed
March	$2x$	$1.6x$	$3x + 90$	$x + 300$
April	$2x + 400$	$2x + 400$	$2x - 100$	$1.6x - 80$
May	$2x + 600$	$x + 300$	$4x - 800$	$3x - 600$
June	$2.5x$	$2x$	$1.5x$	$1.5x$
July	$x + 100$	$0.9x + 90$	$2x + 400$	$1.6x + 320$

Number of air conditioners installed in April and June together:

$$(2x + 400) + 2x = 4x + 400$$

Number of air coolers installed in March and May together:

$$(x + 30) + (3x - 600) = 4x - 570$$

Required difference = $(4x + 400) - (4x - 570) = 970$

Hence, option B.