# TCS NQT - Reasoning Ability

## This PDF includes:

- **Word Pattern ( Logical Sequence Of Words )**
- **Letter Series ( Letter And Symbol Series )**
- **Number Series**
- **Seating Arrangements**
- **Coding and Decoding ( Coding Deductive Logic )**
- **Blood Relations**
- **Directional Sense**
- **Cube Folding ( Cube )**
- **Paper Cutting**
- **Visual Reasoning ( Statement and Conclusion )**
- **Syllogism ( Logical Venn Diagram Based DI )**

| TCS NQT Foundation Logical ability | Difficulty Level | Questions | Topics | Features |
|---|---|---|---|---|
| Indentifying word and Numeric patterns | Medium -high | 2-3 | Word Pattern, Letter Series Number Series | Min. 3 Questions |
| Problem Solving | Medium -high | 3- 4 | Seating arrangements, Blood relations, Data Arrangement | Avg. 5 Questions |
| Figure and Fractal Analysis | Medium | 3-4 | Cube Folding's, Paper Cuts and Folds | Min. 3 Questions |
| Decision Making | Medium -high | 1- 2 | Decision making, Syllogism Data Sufficiency | Min. 2 Questions |
| Prepositional Reasoning | Medium | 2- 3 | Statements based, Logical venn diagram Based DI | Min. 5 Questions |
| Visual/Spatial Reasoning | Medium | 1-2 | Finding the Next figure based on existed data | Mostly 2 Questions |

# Number Series Formula

## Formulas for Number series

Here on this page you will get to know about the Number Series formulas with its definition and types. You will also get to learn, How to solve Questions with the help of formulas.

**Definition :**A number series, also known as a numerical series or sequence, is a set of numbers arranged in a specific order following a particular pattern or rule. Each number in the series is called a term, and the order of the terms is crucial as it defines the pattern. The pattern can be based on arithmetic progression, geometric progression, or any other mathematical relationship.

## Number Series Formulas:

Number series is a sequence of numbers which is framed, using a particular system/rule, in which the numbers are not in a specific order. All we have to do is to find out the system/rule that a particular series is following and finding the number using that system/rule.

**For Example :** 3, 9, 27, 81 ?

It is Geometric series.

Each term is Multiplied by 3.

So , 81 x 3 = 243

## Formulas for Number Series :

|  | Arithmetic Progression | Geometric Progression |
|---|---|---|
| Sequence | $a, a+d, a+2d, \ldots, a+(n-1)d, \ldots$ | $a, ar, ar^{2}, \ldots, ar^{(n-1)}, \ldots$ |
| Common Difference or Ratio | Successive term – Preceding term<br><br>Common difference $= d = a_2 - a_1$ | Successive term/Preceding term<br>Common ratio $= r = ar^{(n-1)}/ar^{(n-2)}$ |
| General Term (nth Term) | $a_n = a + (n-1)d$ | $a_n = ar^{(n-1)}$ |
| nth term from the last term | $a_n = l - (n-1)d$ | $a_n = l/r^{(n-1)}$ |

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| | Arithmetic Progression | Geometric Progression |
|---|---|---|
| Sum of first n terms | $s_n = n/2(2a + (n-1)d)$ | $s_n = a(1 - r_n)/(1 - r)$ if $|r| < 1$<br>$s_n = a(r_n -1)/(r - 1)$ if $|r| > 1$ |

## Types of number series:-

Types of Number Series is given below:

1. **Arithmetic Sequence :** A sequence in which every term is created by adding or subtracting a definite number to the preceding number is an arithmetic sequence.

2. **Geometric Sequence :** A sequence in which every term is obtained by multiplying or dividing a definite number with the preceding number is known as a geometric sequence.

3. **Harmonic Sequences :**

   A series of numbers is said to be in harmonic sequence if the reciprocals of all the elements of the sequence form an arithmetic sequence.

4. **Fibonacci Numbers :** Fibonacci numbers form an interesting sequence of numbers in which each element is obtained by adding two preceding elements and the sequence starts with 0 and 1.

**Add Up Series :**
**Add up Series +**
**Add up Series -**
**Square up and Square Add up Series :**
**SQUARE UP AND SQUARE ADD UP SERIES +**
**SQUARE UP AND SQUARE ADD UP SERIES -**
**Questions and Answers for Number Series :**

**Question :** Find the missing number? 99, 121, 143, ___, 187, 199 .

A. 170

B. 165

C. 158

D. 172

**Answer : 165**

Explanation:

The given series is an AP with first term as 99 and common difference as 22.

**Question :** Find the next term in the series : 51,52,53,55,58,63,____.

A. 69

B. 77

C. 81

D. 71

**Answer : 71**

Explanation:

Fibonacci series is added to each term.

51 + 0 =51

51 + 1=52

52 + 1=53

53 + 2=55

55 + 3=58

58 + 5=63

63 + 8=71

**Question :** Find the missing terms? 97,122,107,132,__,__.

A. 117,142

B. 122,112

C. 141,131

D. 121,131

**Answer : 117,142**

Explanation:

This series is a result of alternate +25 and -15.

97 + 25=122

122 − 15=107

107 + 25=132

132 − 15=117

117 + 25=142

So, the next two terms are 117 and 142.

**Question :** Fill the missing term in the series

100, 92, 86 ,82, 74, 68, 64, 56, 50, __, ___.

A. 44, 36
B. 40, 34
C. 46, 38
D. 44, 32

**Answer : 46, 38**

Explanation:

The number series are in successive subtraction series of − 8, -6, -4 and then again -8,-6,-4.
So, the next terms after 50 will be 50-4=46 and 46-8=38.

**Question :** Select the missing number from the given responses.

19, 35, 67, 131, 259, 515, ?

A. 1281
B. 1291
C. 1071
D. 1027

Explanation :

11 × 2 − 3 = 19
19 × 2 − 3 = 35
35 × 2 − 3 = 67
67 × 2 − 3 = 131
131 × 2 − 3 = 259
259 × 2 − 3 = 515
515× 2 − 3 = 1027

# How To Solve Number Series Question Quickly

## How to Solve Number Systems Problems Quickly in Logical

Here , In this Page How to Solve Number Series Questions Quickly is given.

Number system is the standard of representing numbers . The same sequence of numbers or symbols may represent different value of numbers in different numeral systems.

In this Page different types of Questions is also given and shown how to solve the questions.

**Number Series :**Number series is a sequence of numbers which is framed, using a particular system/rule, in which the numbers are not in a specific order. All we have to do is to find out the system/rule that a particular series is following and finding the number using that system/rule.

## Solving Number Series Questions Effectively Tips and Tricks

- There are following types of number Series patterns –

1.

    1. Numeric Number Series (This page)

    2. Alphabet Series (Visit Alphabet Series Page)

    3. Alpha Numeric Series(Not asked in Placements, only in CAT exam)

- There are the following most popular number series, We will discuss all these in details here we are just introducing them to you, so don't worry if you don't see the pattern just yet, after this post you will be able solve any Number Series Question in the world .

## Types of Number Series Problems –

- **Add up Series (+) :** Just adding a constant number everytime. For example:  (13, 18, 23, 28 ….).

- **Add up Series (- ):** , Just subtracting a constant number every time. For example : (28, 23, 18, 13 ……).

- **Step up Series (+/-) :** Adding/Subtracting a variable number, in this case we are adding 2n for n = 0, 1, 2, 3 …… For example : 0, 2, 6, 12, 20…. or 20, 12, 6, 2, 0, 0 …..

- **Square up (+/-)** –  Given series is in the square of n where  n= 1,2,3,4,5,6… i.e. 1,4,9,16,25,36…

- **Square add up Series(+/-) :** Adding $n^2$ every time and incrementing value of n starting from 1 i.e. 1,5, 14, 30, 55, ……  and Subtracting $n^2$ every time and decrementing value of n i.e. 34, 33, 29, 20,

- **Cube Up Series :** Given series is in the cube of n where n = 1,2,3,4,5,6… i.e. 1,8,27,64,125,216….

- **Cube add up Series :** Adding $n^3$ every time with incrementing of n by 1 i.e. 1,9,36…

- **Prime up(+/-) :** Sequence consist of Prime numbers i.e. 2,3,5,7,11…

- **Prime Square up(+/-) :** Sequence consist of squares of prime numbers i.e. 4,9,25,49,121..

- **Arithmetic Series:** Sequence consist of Arithmetic Progression i.e. 3,6,9,…

- **Geometric Series :** Sequence consist of Geometric Progression i.e. 2,6,18,54,…

Now lets try to learn each of these in detail, do let us know in comments section if you're not able to understand any problem concept, we will help you out with alter logic.

**Add Up Series :**
**Add up Series +**
**Add up Series -**
**Set Up Series :**

- Probability of asking – Medium

- Difficulty – Low

- Reason –  Infosys, IBM etc

- After our concept you will always be able to solve this problem and will always look easy, but had you not been reading this 30% students are not able figure out correct series of such problems

**Step Up Series +**
**Step Up Series -**
**Square up and Square Add up Series :**

- Probability of asking – Low

- Difficulty – Hard

- Reason – Infosys(very rarely) etc

- After our concept you will always be able to solve this problem and will always look easy, but had you not been reading this 90% students are not able figure out correct series of such problems

**Prime up and Prime Square up Series(Very hard to Identify) :**

- Probability of asking – Medium

- Difficulty – Hard

- Reason – Infosys, IBM.  etc

- After our concept you will always be able to solve this problem and will always look easy, but had you not been reading this 70% students are not able figure out correct series of such problems

**SQUARE UP AND SQUARE ADD UP SERIES +**
**SQUARE UP AND SQUARE ADD UP SERIES -**

## How to Solve Number Series Questions Quickly

- **Number series:**
  - A series of different numbers following some logical pattern of various mathematical concepts. One has to analyze the concept used and accordingly find out the missing number of the series.

Generally, there are 5 different types of series, which are explained below with examples:

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## Type 1.How to Solve Number Series Questions Quickly – Perfect Square questions

**Question 1. Find the missing numbers from the series?**

**225, 256, 289, —, 361—, 441**

**Options:**

**A.  324, 400**

**B.  325, 450**

**C.  320, 392**

**D.  None of the above**

**Solution:**    $(15)^2$= 15 x 15= 225

$(16)^2$= 16 x 16= 256

$(17)^2$= 17 x 17= 289

$(18)^2$= 18 x 18= 324

$(19)^2$= 19 x 19= 361

$(20)^2$= 20 x 20= 400

$(21)^2$= 21 x 21= 441

**Correct option: A**

**Question 2. Find the missing number from the series?**

**4, 16, 36, —, 100, —, 196**

**Options:**

A.  49, 121

B.  64, 144

C.  81, 169

D.  None of the above

**Solution:**   Here the series contains a perfect square of ever alternate even number like

2 x 2 = 4

4 x 4 = 16

6 x 6 = 36

8 x 8 = 64

10 x 10 = 100

12 x 12 = 144

**Correct option: B**

**Question 3. Find the wrong number in the series?**

**50, 75, 111, 160, 225**

**Options:**

A.  181

B.  224

C.  225

D.  None of the above.

**Solution:** Here the first number is 50 which is not a perfect square, the next number is 75, which again is not a perfect square. Hence this is evident that the series is not a perfect square series, but the difference between the two perpetual numbers of the series is 25 (75-50), 36 (111-75), 49 (160-111) and all these numbers are perfect squares, Hence the next number shall be 160+64= 224 But here its 225, Hence Option C is the correct One.

**Correct option: C**

## Type 2. How to Solve Number Series Questions Quickly : Perfect cube series

- Such series consists of numbers that perfect cubes. Some of its examples are mentioned below:

**Question 1. Fill in the blank with a number that will follow the below-mentioned series?**

**343, 729, —-, 2197, 3375**

**Options:**

**A. 1331**

**B. 1000**

**C. 4096**

**D. None of the above**

**Solution:** This series consists of perfect cubes of perpetual odd numbers beginning from 7. Like 7, 9, 11, 13, 15 and so on.

343 (7 x 7 x 7)

729 (9 x 9 x 9)

1331 (11 x 11 x 11)

2197 (13 x 13 x 13)

3375 (15 x 15 x 15)

**Correct option: A**

**Question 2. There is one wrong number which is not following the pattern of the series. Find out that number from the options given below?**

**2197, 5832, 12168, 21952, 35937**

**Options:**

**A. 12168**

**B. 2197**

**C. 21952**

**D. 35973**

**Solution:**    $13^3$= 2197

$18^3$= 5832

$23^3$= 12167

$28^3$= 21952

$33^3$= 35952

In this series 5 is added to each cube digit to get the next cube number. Like (13+5)= 18; (18+5)= 23….

**Correct option: A**

**Question 3. Find the missing numbers from the series?**

**9261, 32768,——— , 157464, 274625,———**

**Options:**

**A. 79507, 438976**

**B. 81454, 398676**

**C. 68921, 45887 6**

**D. None of the above.**

**Solution:** $21^3 = 9261$

$32^3 = 32768$

$43^3 = 79507$

$54^3 = 157464$

$65^3 = 274625$

$76^3 = 438976$

Here 11 is added to each cube digit to get the next cube number like 21+11= 32

31+11= 43 and so on.

**Correct option: A**

## Type 3. How to Solve Number Series Questions Quickly : Ration Series

- This series contains numbers arranged in a particular order, and there is a set pattern of variance between each digit of the series. Now we have to analyze that pattern and accordingly calculate the next missing number of the series.

- This is explained with a couple of examples mentioned below:

**Question 1. Find the missing numbers from the series?**

**12, 24, −, 96, −, 384**

**Options:**

**A. 48, 192**

**B. 36, 108**

**C. 72, 288**

**D. None of the above.**

**Solution:** In this series, it is evident that 2 is multiplied to each consecutive number to get the next number. Which is mentioned below:

12 x 2 = 24

24 x 2 = 48

48 x 2 = 96

96 x 2 = 192

192 x 2 = 384

Therefore option A is the correct one.

**Correct option: A**

**Question 2. Which one is/are the wrong number which is not following the series trend?**

**12, 24, 48, 816, 16214, 32424**

**Options:**

**A.** 16214

**B.** 12, 24

**C.** 48, 816

**D.** 32424

**Solution**   If we separate unit digit of the number:

(1+1= 2; 2+2= 4)= 24

(2+2= 4; 4+4= 8)= 48

(4+4= 8; 8+8= 16)= 816

(81+81= 162; 6+6= 12)= 16212

(162+162= 324; 12+12= 24)= 32424

Hence option A is the correct one.

**Correct option: A**

**Question 3.  Find the missing numbers from the series below?**

**3, 21, 147, —, 7203, —-**

**Options:**

**A.** 2209

**B.** 1029

**C.** 6172

**D. None of the above**

**Solution:** This series consists of a sequence where each number is multiplied by 7:

3

3 x 7 = 21

21 x 7 = 147

147 x 7= 1029

1029 x 7 = 7203

7203 x 7 = 50421

**Correct option: B**

## Type 4. How to Solve Number Series Questions Quickly : Geometric series

- Geometric series is a formula based series wherein the missing number is calculated by either adding, multiplying, subtracting or dividing the consecutive term with a constant number.

Its formula is mentioned below:

G S= {a, ar, ar$^2$, ar$^3$,....}

Where the a= first term of the series

R= factor or difference between the term, also known as the common ratio.

**Question 1. Find the missing numbers from the below-mentioned series?**

**1, 3, 9, 27 , −, 243, —**

**Options:**

**A. 81, 729**

**B. 27, 729**

**C. 81, 486**

**D. None of the above**

**Solution:**   Here a = 1 (first term of the series)

R = 3 ( common number that is multiplied with the consecutive number of the series)

Hence we get:

1

1 x 3

$1 \times 3^2 = 9$

$1 \times 3^3 = 27$

$1 \times 3^4 = 81$

$1 \times 3^5 = 243$

$1 \times 3^6 = 729$

**Correct option: A**

**Question 2. Find the wrong number which does not follow the series pattern?**

**5, 7, 15, 35, 77 , 161**

**Options:**

**A.  15**

**B.  5**

C. 7

D. 35

E. 112

F. 455

**Solution:**   5 x 0 + 7= 7

7 x 1 + 7= 14

14 x 2 + 7 = 35

35 x 2 + 7 = 77

77 x 2 + 7 =  161

**Correct option: A**

**Question 3. Find the missing number from the below series?**

**9, 81, —, 6561, 59049**

**Options:**

**A.  648**

**B.  729**

**C.  3281**

**D.  None of the above**

**Solution:**    9

9 x 9 = 81

81 x 9 = 729

729 x 9 = 6561

6561 x 9 = 59049

**Correct option: B**

## Type 5. How to Solve Number Series Questions Quickly : Mixed series

- Here the series is formulated by using more than one arithmetic logic.

**Question 1.  Find out the missing numbers from the below series?**

**81, 80, 84, −, 91, 66, −, 53**

**Options:**

**A.)  88, 76**

**B.)  75, 102**

**C.)  76, 95**

**D.)  None of the above**

**Solution:**    $81 + 0^2 = 81$

$81 - 1^2 = 80$

$80 + 2^2 = 84$

$84 - 3^2 = 75$

$75 + 4^2 = 91$

$91 - 5^2 = 66$

$66 + 6^2 = 102$

$102 - 7^2 = 53$

**Correct option: B**

**Question 2.** There is one wrong number in the below series which is not following the series pattern. Find out that number?

**39, 120, 365, 1092**

**Options:**

**A. 39**

**B. 365**

**C. 120**

**D. 1092**

**Solution:** 12

12 x 3 + 3 = 39

39 x 3 + 3 = 120

120 x 3 + 3 = 363

**Correct option: B**

**Question 3.** Below series contains a wrong number, find the one which does not follow the series trend?

**12, 61, 307, 7656, 38281**

**Options:**

**A. 12**

**B. 307**

**C. 61**

**D. 7656**

**E. 38281**

**Solution:**   12 + 12 x 5+1= 61

61 x 5 +1= 306

306 x 5+1= 1531

1531 x 5+1= 7656

7656 x 5+1= 38281

**Correct Option: B**

# Tips And Tricks And Shortcuts For Number Series

## Number series Tips and Tricks and Shortcuts

Here on this page Number series Tips, Tricks and Shortcuts is given to solve the question easily and effectively. You will also get some of its Types along with question and answers.

### Number Series :

• In Number Series When we identify pattern then It is Easy to Find any particular term.
• This Page helps you to Solve Questions in less time. So basically there are five different types of number series. There are mentioned below with one suitable example:

## Number Series Tips, Tricks and Shortcuts :

| Number Series Types | Explanation |
|---|---|
| Add up Series (+) | Just adding a constant number everytime. For example: (13, 18, 23, 28 ….). |

| Number Series Types | Explanation |
|---|---|
| **Add up Series (-)** | Just subtracting a constant number every time. For example : (28, 23, 18, 13 ……). |
| **Step up Series (+/-)** | Adding/Subtracting a variable number, in this case we are adding 2n for n = 0, 1, 2, 3 …… For example : 0, 2, 6, 12, 20…. or 20, 12, 6, 2, 0, 0 ….. |
| **Square up (+/-)** | Given series is in the square of n where n= 1,2,3,4,5,6… i.e. 1,4,9,16,25,36… |
| **Square add up Series(+/-)** | Adding n2 every time and incrementing value of n starting from 1 i.e. 1,5, 14, 30, 55, …… and Subtracting n2 every time and decrementing value of n i.e. 34, 33, 29, 20, |
| **Cube Up Series :** | Given series is in the cube of n where n = 1,2,3,4,5,6… i.e. 1,8,27,64,125,216…. |
| **Cube add up Series :** | Adding $n^{3}$ every time with incrementing of n by 1 i.e. 1,9,36… |
| **Prime up(+/-) :+** | Sequence consist of Prime numbers i.e. 2,3,5,7,11… |
| **Prime Square up(+/-) :** | Sequence consist of squares of prime numbers i.e. 4,9,25,49,121.. |
| **Arithmetic Series:** | Sequence consist of Arithmetic Progression i.e. 3,6,9,… |
| **Geometric Series :** | Sequence consist of Geometric Progression i.e. 2,6,18,54,… |

## Tips and Tricks – Perfect Square Series

Consists of the perfect square of some numbers arranged in a specific order, with one number missing. Now we've to find the pattern the series is following and fill up the blank accordingly by finding that number.

**Question 1. 100,121,144,__, 196**

Solution:

This series consists of a perfect square of consecutive numbers 10, 11, 12, 13

Hence 169 will come in the blank.

## Tips and Tricks – Perfect Cube Series

It consists of a cube of numbers sequenced in a particular order. The sequence would be like go om adding the cube of that specific given number.

**Question 2. 9,64, 125, __, 343**

Solution:

This series consists of a series of numbers with perfect cubes the is (3 x 3 x 3), (4 x 4 x 4), (5 x 5 x 5), (6 x 6 x 6), (7 x 7 x 7)

Hence 216 will be coming in the blank, as the series is following a trend of cubes of numbers in sequential order.

Tips and Tricks and Shortcuts- Ration Series

This type of series consists of numbers arranged in sequential order (following a particular trend, i.e., Either increasing or decreasing). Now, all we have to do here is to trace out this trend,**(which could be *, /, +, -)** of each number of the series with a fixed number) by finding the proportional difference between the numbers of the series.

**Question 3. 3, 6, 9, 12, __, 18, 21**

Solution:

Here the series is following an increasing trend in which three is added to each number of the series.

3

6 (3+3)

9 (6+3)

12 (9+3)

15 (12+3)

18 (15+3)

21 (18+3)

Tips and Tricks and Shortcuts – Arithmetic series

In this kind of sequences, each number is found by ( + , -) each term by a constant number.

**The formula of  A S = {a, a+d, a +2d.....}**

Where a= first term of the series

d = common difference

**Question 4. 3, 6, 9 , 12**

Solution:

Here a = 3(first term of the series)

d = 3

Hence we get:

3 + 3 = 6

6 + 3 = 9

9 + 3 = 12

12 + 3 = 15

Tips and Tricks and Shortcuts – Geometric series

In this kind of sequences, each number is found by (*, /) each term by a constant number.

**The formula of G S= {a, ar, $ar^2$, $ar^3$,....}**

Where a= first term of the series

R= factor or difference between the term, also known as the common ratio.

**Question 5. 1, 2, 4, 8, 16, 32**

Solution:

Here a = 1 (first term of the series)

r = 2 (a standard number that is multiplied with the consecutive number of the series)

Hence we get:

1

1 x 2

$1 \times 2^2$

$1 \times 2^3$, ....)

# Formulas for Seating Arrangement

## Seating Arrangement Formulas

Seating arrangements are a common puzzle-solving component in logical reasoning tests, competitive exams, and various assessments. This page is designed to provide you with a deep understanding of the essential formulas and techniques required to solve seating arrangement puzzles effectively and efficiently.

**Definition :**A seating arrangement refers to the systematic organization of individuals, objects, or elements in specific positions based on given conditions or constraints.

**Facing Center :**1.Towards Left – Clockwise Rotation.
2.Towards Right – Anticlockwise Rotation.
**Facing Outwards :**1.Towards Left – Anticlockwise Rotation. 2.Towards Right – Clockwise Rotation.

## Types of seating arrangements

1. Linear seating arrangement

In linear arrangement questions the arrangement of person is in linear, which means the student have to arrange them in a line. In these questions generally a single row of arrangement is formed.

## 2. Double row seating arrangement

Double row arrangement questions includes two group of persons. The students need to arrange one group in first row and another group in second row. The persons sitting in these rows generally faces each other. Usually, one row faces the North direction and other row faces the South direction.

## 3. Circular seating arrangement

In Circular arrangement questions the arrangement of people is done around a circular table. There are primarily three types of questions under circular seating arrangement.

- Circular arrangement with people facing center of the table.
- Circular arrangement with people facing outward of the table.
- Circular arrangement with people facing center of the table whereas some facing outward the table.

## 4. Square/Rectangular seating arrangement

In square/rectangular arrangement questions the arrangement of people is done around a square/rectangular table. These types of questions are similar to circular seating arrangement questions and it also includes inward, outward or both side facing questions.

## Formulas for Seating Arrangement:

1. **Linear Seating Arrangement:**
   - **Adjacent Seats:** If two individuals are sitting next to each other, you can treat them as a single unit for arrangement purposes.
2. **Circular Seating Arrangement:**

- o **Clockwise and Counterclockwise:** When arranging individuals in a circular pattern, keep track of both clockwise and counterclockwise positions.

3. **Rectangular Table Seating:**

   - o **Rows and Columns:** In a rectangular table, identify rows and columns for better organization.

   - o **Facing Each Other:** When individuals are facing each other, they occupy opposite corners of the rectangle.

4. **Grouping and Arrangement:**

   - o **Clusters or Groups:** If the arrangement involves grouping, consider forming clusters based on related conditions.

   - o **Group Arrangements:** Arrange individuals within the group as per their specific conditions.

5. **Fixed Positions and Constraints:**

   - o **Fixed Elements:** If any elements have fixed positions, place them first. They act as reference points for arranging others.

   - o **Using Constraints:** Utilize given constraints to eliminate invalid positions and refine the arrangement.

## Questions on Seating Arrangements :

**Question 1:**

Five friends – Alice, Bob, Carol, David, and Eve – are sitting in a row facing north. If Carol is sitting two places to the left of Eve, who is sitting at one of the ends?

A) Alice

B) Bob

C) Carol

D) David

**Answer :** B)

**Explanation:** If Carol is two places to the left of Eve, the arrangement could be: David, Carol, Alice, Eve, Bob. Bob is sitting at one of the ends.

**Question 2:**

In a circular seating arrangement, six students – Alex, Ben, Chris, David, Eve, and Frank – are sitting equidistant from each other. If David is sitting between Ben and Chris, who is sitting directly opposite to Alex?

A) Ben

B) Chris

C) Eve

D) Frank

**Answer :** D)

**Explanation:** Since David is sitting between Ben and Chris, the arrangement could be: Eve, Alex, Chris, David, Ben, Frank. Frank is sitting directly opposite to Alex.

**Question 3:**

Seven people – Alice, Bob, Carol, David, Eve, Frank, and Grace – are sitting in a circle for a discussion. If Alice is sitting two seats to the right of Bob, who is sitting next to Carol?

A) Alice

B) Bob

C) David

D) Frank

**Answer :** C)

**Explanation:**  If Alice is two seats to the right of Bob, the arrangement could be: David, Grace, Carol, Bob, Alice, Frank, Eve. David is sitting next to Carol.

**Question 4:**

A rectangular table has six seats on each of its longer sides and four seats on each of its shorter sides. If Alice is sitting in one of the corners and Bob is sitting two seats to the right of Alice, who is sitting diagonally opposite to Alice?

A) Carol

B) David

C) Eve

D) Frank

**Answer :** C)

**Explanation:**  If Bob is two seats to the right of Alice, the arrangement could be: David, Eve, Bob, …, …, …, …, Alice. Eve is sitting diagonally opposite to Alice.

**Question 5:**

Ten students – Alex, Ben, Carol, David, Eve, Frank, Grace, Harry, Ivy, and Jack – are sitting in a row facing north. If Alex is sitting two places to the left of Frank, who is sitting exactly in the middle?

A) Ben

B) Carol

C) David

D) Eve

**Answer :** B)

**Explanation:** If Alex is two places to the left of Frank, the arrangement could be: Grace, Harry, Ivy, Alex, Frank, Eve, David, Carol, Ben, Jack. Carol is sitting exactly in the middle.

# How To Solve Seating Arrangements Questions Quickly

## How to solve Seating Arrangement Questions Quickly

Elevate your problem-solving prowess today with our comprehensive guide on how to solve seating arrangement questions quickly. Discover shortcuts, logical approaches, and step-by-step methods that will empower you to solve seating arrangement problems efficiently.

**Definition :** A seating arrangement refers to the systematic organization of individuals, objects, or elements in specific positions based on given conditions or constraints.

## Why Focus on Quick Solutions?

Time is of the essence in any exam. Seating arrangement questions often involve arranging individuals in a specific order or pattern, which can be time-consuming if not approached strategically. By learning how to solve these questions quickly, you not only save valuable time but also create more room for other challenging sections of the exam.

## Strategies for Various Types of Seating Arrangements:

Seating arrangement questions come in various formats, each with its unique set of challenges. Let's explore strategies for tackling different types of seating arrangements:

1. **Linear Arrangements:** In linear arrangements, individuals are seated in a single line or row. Begin by identifying fixed positions or relationships, such as "A sits at one of the ends." Use this information as a starting point to deduce the positions of other individuals.

2. **Circular Arrangements:** Circular arrangements involve individuals seated around a table or in a circle. Start by selecting a fixed point and establishing directions (clockwise or counterclockwise). Pay attention to adjacent relationships and any hints about facing directions.

3. **Rectangular Arrangements:** Rectangular arrangements are like tables with rows and columns. Visualize the arrangement as a grid and note the individuals seated in specific rows and columns. Use this structure to deduce the positions of other individuals.

4. **Mixed Arrangements:** Some questions combine different seating formats, making them more intricate. Approach mixed arrangements by breaking them down into individual seating types and solving each part separately.

**Practice Makes Perfect:** The key to mastering any skill is practice. Utilize practice sets and mock tests to apply the strategies you've learned. Gradually, you'll become more comfortable identifying patterns and making quick deductions.

## How To Solve Seating Arrangement Questions : Linear seating Arrangement

### Question 1:

7 men standing in a row to be selected for a competition. Their names are Peritosh, Rajiv, Suresh, Vaibhav, Akshat, Aditya, and Mahesh.

Mahesh is standing left to Rajiv.

Rajiv is not next to Suresh

Only one person is on Right of Akshat

Aditya is standing in the middle and between Peritosh and Suresh.

Who is standing between Aditya and Akshat?

A. Suresh
B. Vaibhav

C. Mahesh

D. None of the above

**Correct answer:** A

**Explanation :**

According to the information the seating arrangement can be done in the following way:

According to the diagram above Suresh is standing between Aditya and Akshat.

**Question 2:**

Preksha, Akansha, Ridhima, Ramesh, Sugandha and Kittu are sitting in a row watching a magic show. Sugandha and Kittu are sitting in the middle of them all. Akansha and Ridhima are sitting at the two different ends. Ridhima is sitting on the right of Preksha.

Who is sitting on Akansha's immediate right?

A. Preksha

B. Ramesh

C. Ridhima

D. Sugandha

**Correct answer:** B

**Explanation:**

On the basis of the information given in the question above the seating arrangement can be done in the following way:

According to the pictorial representation above Ramesh is sitting on Akansha's immediate right.

**Question 3:**

Seven girls are living in seven different cottages standing in a row. They are living under these conditions:

Nitu's cottage is on Mercy's left
Anita is not Binny's neighbor
Only one cottage is on Erica's right
Siddi's cottage is in the middle and between Shella and Anita.

Whose cottage is immediate next to Erica?

A. Siddi

B. Mercy

C. Binny

D. Shella

**Correct answer:** C

**Explanation:**

On the basis of the information given in the question above the seating arrangement can be done in the following way:

According to the above arrangement, Binny's cottage is immediately next to Erica.

## Solve Questions on Seating Arrangements : Double Row Seating Arrangements

### Question 4:

10 Students sits for a debate in 2 rows facing each other. Each row have equal number of students. They are C, D, T, B, P, A, R, S, J, and Z.

I.   C who sits left to D is opposite to T.
II.  B is opposite to P who sits on A's next.
III. R sits at the end of the row.
IV. S sits opposite to D.
V.   J sits immediate right to T.

VI . A is opposite of R

Who sits on D's second left?

A.  B

B.  A

C.  Z

D.  C

**Correct answer:** C

**Explanation:**

According to the information given above the following diagram is made:

According to the diagram Z sits on D's second left.

### Question 5:

5 people Q, P, S, R, T sits in Row 1 and 5 people B, A, D, C, E sits in Row 2. People in Row 1 sits facing North direction and people in Row 2 sits facing South direction.

I.   P sits second on R's right.;
II.  The person facing P sits on D's immediate left.
III. B sits second on D's right.
IV. Two people sits between B and E.
V.  T is not R's immediate neighbor.
VI. C does not faces T.
VII.S neither faces D nor does he sit at the end of the row

Who is facing Q?

A.  C

B.  A

C.  B

D.  D

**Correct answer:** D

**Explanation:**

According to the information given above the following diagram is made:

According to the diagram D is facing Q.

**Question 6:**

There are two rows each having 6 people. People in row 1 faces west and people in row 2 faces east

Row 1: Manju, Sangeeta, Saurabh, Anil, Vijay and Vishwas.

Row 2: Parul, Kapil, John, Dhruv, Esha and Satya.

Kapil sits at the end of the row and second on Esha's left.

Two people are sitting between Satya and Parul.

One person is between Vijay and Anil.

Vishwas sits third on Sangeeta's right and is not opposite to either Kapil or Esha.

Anil and Vijay are not opposite to Kapil.

Manju and Anil are next to each other.

Parul and John are not next to each other and not opposite to Vijay.

How many people are sitting between Anil and Saurabh?

A. Two

B. Four

C. Three

D. One

**Correct answer:** A

**Explanation:**

According to the information given above the following diagram is made:

According to the diagram above two people are sitting between Anil and Saurabh.

## Seating Arrangement How To Solve Questions: Circular seating arrangement

### Question 7:

6 friends Sukhi, Arvind, Sakshi, Meena, and Dipali are sitting in a circle facing the center.

Meena is a neighbor of Sakshi and Dipali

Sukhi is next to Sakshi.

Sakshi is second right to Dipali and third left to Ritu.

Who is sitting between Ritu and Sukhi?

A.  Sakshi

B.  Arvind

C.  Dipali

D.  No one

**Correct answer:** B

**Explanation:**

On the basis of the information given in the question above the seating arrangement can be done in the following way:

According to the diagram above Arvind is sitting between Ritu and Sukhi.

**Question 8:**

Shivam, Anjali, Manju, Sanjay, Pankaj, Vijay, Raj, and Ajay are sitting around a circular table. Shivam is second right to Ajay who is sitting third right to Anjali. Sanjay is sitting second left to Vijay who is sitting between Ajay and Shivam. Manju is not either Anjali or Pankaj's neighbor.

Who is sitting immediate left to Manju?

A. Raj

B. Vijay

C. Anjali

D. None of the above

**Correct answer:** D

**Explanation:**

According to the information given above the following diagram is made:

According to the diagram option D is correct.

**Question 9:**

Monika, Urvashi, and Tariq are sitting around a circular table facing the centre. Arif, Binny, and Charlie are also sitting around the same table but two of them are facing outwards. Monika is second left to Charlie. Urvashi is second right to Arif. Binny is third left to Tariq. Charlie is second right to Tariq. Arif is sitting next to Monika.

Who is not facing the center?

A. Binny

B. Arif

C. Ajay

D. Vijay

**Correct answer:** A

**Explanation:**

According to the information given above the following diagram is made:

According to the diagram above Binny and Charlie are not facing the center.

How to Solve Seating Arrangement Question : Square / Rectangular Seating Arrangement

**Question 10:**

P, A, B, Q, C, R, S, and T are S are sitting around a square table in such a way that 4 are sitting at corners and four are at the sides.

P sits second right to R. R sits on one of the sides.

S sits second right to Q and does not sit at the corner.

Two people sits between Q and A.

B is not immediate to S.

T sits second left to A.

C is not immediate neighbor of S or R.

Who sits between R and P?

A. A

B. B

C. C

D. T

**Correct answer:** B

**Explanation:**

According to the information given above the following diagram is made:

According to the diagram B sits between R and P.

**Question 11:**

Six people Anil, Bina, Chinky, Daniel, Ema, and Fiza sits at six corners of a hexagon table. Anil does not sit adjacent to Bina or Chinky. Daniel does not sit adjacent to Chinky or Ema. Bina and Chinky are immediate neighbor. Fiza sits between Daniel and Chinky.

Who sits opposite to Ema?

A. Daniel

B. Chinky

C. Fiza

D. Bina

**Correct answer:** C

**Explanation:**

According to the information given above the following diagram is made:

According to the diagram Fiza sits opposite to Ema.

**Question 12:**

A, B, X, Y, C, D, V, and W are sitting around a square table for office meeting. They are sitting in such a way that four are at the corners and four are at the sides. The people sitting at the sides faces at the center and people sitting at the corners faces outside.

Y sits third right to V.
V faces the center.
C sits third left to X who does not sit at the sides.
Only one person sits between C and D.
D is not immediate neighbor of X.

W faces at the center.

A is not immediate neighbor of D.

Who is second left to B?

A. X

B. C

C. D

D. W

**Correct answer:** A

**Explanation:**

According to the information given above the following diagram is made:

According to the diagram X is second left to B

# Tips And Tricks And Shortcuts To Solve Seating Arrangements

## Tips and Tricks for Seating Arrangements

Unlock efficient problem-solving with our collection of invaluable tips, tricks, and shortcuts for seating arrangements. Navigating through complex seating scenarios in exams and assessments becomes a breeze as we reveal time-saving strategies to crack these puzzles.

**Best Tip:** When tackling seating arrangement questions, one invaluable tip stands out: employ the cross-checking method. As you deduce the positions of individuals based on the given conditions, cross-check your deductions with multiple other conditions.

## Terms related to Seating Arrangements :

1. **Adjacent:** Individuals or items that are next to each other in the arrangement, either horizontally or vertically.

2. **Alternate:** A pattern where individuals or items are placed in every other position, skipping one in between.

3. **Between:** Refers to an individual or item positioned in the middle of two others.

4. **Clockwise:** A direction that follows the movement of a clock's hands, typically used in circular seating arrangements.

5. **Counter-clockwise:** The opposite direction to the movement of a clock's hands, commonly used in circular seating scenarios.

6. **Diagonal:** Individuals or items that are placed diagonally across from each other in the arrangement.

7. **Facing:** When individuals or items are oriented to look at each other directly, often used in circular arrangements.

8. **Opposite:** Individuals or items positioned directly across from each other, often used in circular or linear arrangements.

## Tips and Tricks for Seating Arrangements

- First of all take a quick glance on the given information, after seeing all the steps, you would get an idea of the situation of the people.

- Determine the practicality of each information and arrange them accordingly.

- To avoid the confusion of left right in circular and square/rectangular arrangement assume that all people are facing the center until and unless the direction is specified.

- If the place of any person is not mentioned definitely but it is mentioned on comparison to other, then it is comparative information. For example, A is sitting left to D.

- If the place of the person is definitely mentioned then it is definite information. For example, A is sitting on the right end.

- Sometimes a part of definite information may consists of negative information. A negative information does not tell anything but gives an idea to eliminate a possibility. For example, A in not sitting immediate left to B.

- While solving the questions if you assume that you are among them it will be easier to to get an idea of the arrangement.

- To solve such type of questions first decode the information and try to draw a pictorial format to understand more effectively.

- In starting consider those statement which are 100% true.

- Then try to understand the statement with negative and indirect information.

- If in any case the possibilities are more than one then try make different diagram for all the possibilities.

- Eradicate those diagrams which disrupts the other information. And finally at the end you will get the final diagram.

## Best Tricks while solving Seating Arrangements Question:

**Grouping and Clustering Technique:**Identify individuals who share specific relationships like "next to," "opposite," or "between".
**Utilize Visualization Strategies:**Before you dive into solving, take a moment to mentally visualize the arrangement.
**Dynamic Elimination Process:**As you eliminate possibilities and place individuals in specific seats, dynamically adjust it based on the new information.
**Practice with Previous Questions:**One of the best ways to improve your skills is by practicing with previously solved seating arrangement questions.

## Seating Arrangement Tips and Tricks : Linear seating arrangement

### Question 1.

Ram, Varun, Avni, Jhotsna, Sonali and Kamlesh are sitting in a row. Sonali and Kamlesh are in the sitting in the middle of the row next to each other such that kamlesh is right of Sonali. Varun and Avni are sitting at the different ends. Avni is sitting right to Ram.

Who is sitting right to Varun?

A. Jhotsna

B. Sonali

C. Kamlesh

D. No one

**Correct answer:** A

**Explanation:**

According to the information the seating arrangement can be done in the following way:

On the basis of the diagram Jhotsna is sitting right to Varun.

**Tips and Tricks and Shortcuts for Seating Arrangement: Double row seating arrangement**

**Question 2.**

Twelve friends are sitting in two rows parallel to each other such that they are at equal distance.
In row A: AB, CD, EF, GH, IJ, KL are seated facing South Direction.
In row B: PQ, RS, TU, VW, XY, ZA are seated facing North Direction.

GH sits third right to CD, either GH or CD sits at the end of the row. The one facing CD sits second right to XY. Two people sit between RS and ZA, neither RS nor ZA sits at the end of the row. The immediate neighbor of RS is facing the person who sits third left to AB. EF and IJ are immediate neighbors. TU sits second left to PQ. IJ is not facing the immediate neighbor of VW.

How many people are seated between KL and EF?

A. Three

B. Two

C. One

D. Zero

**Correct answer:** B

**Explanation:**

According to the information the seating arrangement can be done in the following way:

On the basis of the diagram above two friends are sitting between KL and EF.

**Question 3.**

Who among the following CD is facing?

A. XY

B. TU

C. VW

D. RS

**Correct answer:** C

**Explanation:**

According to the information the seating arrangement can be done in the following way:

On the basis of the diagram above CD is facing VW.

**Tips and Tricks For Seating Arrangements :Circular seating arrangement**

**Question 4.**

Seven classmates are sitting together forming a circle and playing some game. They are A, E, G, L, O, R, and X

L is not sitting next to G or O.

A is sitting adjacent to E and G.

X who is sitting second right to L, is adjacent to O and R.

Who is sitting at the third left of E?

A. O

B .R

C. X

D. G

**Correct answer:** A

**Explanation:**

According to the information given above the seating arrangement can be done in the following way:

On the basis of the diagram above O is sitting third left to E.

**Seating Arrangements Tips and Tricks and Shortcuts: Square/Rectangular seating arrangement**

**Question 5.**

Eight people sitting for a meeting around a square table in such a way that 4 of them are sitting at the corners of the table and other 4 are sitting in the center of its sides. They are Suneet, Vineet, Archana, Vimal, Manu, Deny, Fatima, and Puneet. They are sitting in the following directions:

Vineet is sitting third to the right of Manu.

Suneet is immediate neighbor to Manu.

Puneet is sitting between Vimal and Deny.

Suneet and Fatima are at the two ends

Archana is between Vineet and Suneet

Deny is second left to Manu

Where is Puneet sitting?

A. Next to Archana

B. Between Manu and Suneet

C. Adjacent to Deny

D. Second right to Vimal

**Correct answer:** C

**Explanation:**

According to the information given above the seating arrangement can be done in the following way:

On the basis of the diagram above Puneet is sitting adjacent to Deny.

# Coding Deductive Logic Formulas

## Formulas for Coding Deductive Logic

On this page, we will discuss about Coding Deductive Logic Formulas which will help you remember all the important things before exam.

**Definition:** The code is the system of symbols, letters, or words given certain arbitrary meaning and is used for transferring messages which require secrecy or conciseness. Coding is a method of transmitting messages between sender and receiver which is not understood by any third person.

## Coding Deductive Logic Formulas

There are different types of code which contain various patterns, principles or arrangements which allow the receiver to crack the message or code at the other end using the similar pattern principles or arrangements involved.

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**Types of Coding Deductive Logic :**

## Alphabet Coding Deductive or Letter Coding

In the letter or alphabet coding-deductive questions, the person setting the code replace an alphabet by some other alphabets using a specific arrangement or pattern to form a code. The other person has to decode the code using his mental and logical thinking ability.

## Number Coding Deductive

In number coding deductive questions, the person setting the code allocates arithmetical code values to different words. The other person has to decode the code using his mental and logically thinking ability

## Mixed Letter Coding Deductive/ Deciphering Messages

In mixed letter coding deductive questions, the person setting the code gives an entire message in the code language and asks the code of the particular word. The other person has to pick the common word given in two different messages and then the common word picked will be checked with the code given.

## Coding by Substitution

In substitution coding deductive questions, the person setting the code assigns some specific entities to code names and based on those entities the other person has to recognize the real code name.

## Question and Answers for Coding Deductive Logic:

**Question 1:**

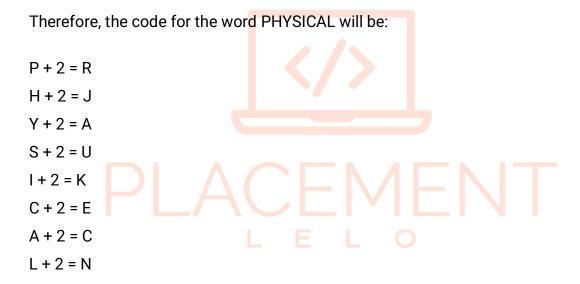**In a certain code language, PARTICULAR is coded as RCTVKEWNCT, How is PHYSICAL written in the same code language?**

**Options**:

A. RJAUKECN
B. SKBVLFBM
C. NCEKUAJR
D. MBFLVBKS

***Correct answer A**

***Explanation:**

To obtain the code for the word PARTICULAR all the letters are moved two steps forward.

Therefore, the code for the word PHYSICAL will be:

P + 2 = R
H + 2 = J
Y + 2 = A
S + 2 = U
I + 2 = K
C + 2 = E
A + 2 = C
L + 2 = N

**Question 2.**

**In a certain code language, FUSION is coded as CRPFLK, How is LIGHT written in the same code language?**

**Options:**

A. JGEFR
B. NKIJV
C. THGIL
D. IFDEQ

***Correct answer: D***

***Explanation:***

To obtain the code for the word FUSION all the letters are moved three steps backward.

Therefore, the code for the word LIGHT will be:

L − 3 = I
I − 3 = F
G − 3 = D
H − 3 = E
T − 3 = Q

## Question 3.

**In a certain code language, SHIVAM is coded as 123456 and NAVEEN is coded as 854998, how is ESHAN written in the same code language?**

**Options**:

A. 91258
B. 21348
C. 45869
D. 85219

***Correct answer: A***

***Explanation:***

[table id=696 /]

According to the table above, ESHAN will be coded as 91258.

## Question 4.

**In a certain language:**

'Udaipur is City' is coded as '2 5 8'.

'City is big' is coded as '3 9 8'

'Udaipur is big' is coded as '9 2 5'

**Which code stands for 'big?'**

**Options:**

A. 9

B. 8

C. 2

D. 5

### Correct answer: A

### Explanation:

The common word between first and third sentence is 'Udaipur is' and the common code is '2 5.' So the remaining words 'city' and 'big' has codes as '8' and '9.' Therefore, code for 'big' is '9.'

### Question 5.

**If bed is bathroom, bathroom is sofa, sofa is fan, fan is wall, wall is light, and light is room, and then where we sit?**

**Options:**

A. Bed

B. Sofa

C. Fan

D. Light

***Correct answer: C***

***Explanation:***

we sit on the sofa and it is given in the question that sofa is fan. Therefore, we sit on the fan.

# How To Solve Coding Deductive Logic Questions Quickly

## How to Solve Coding Deductive Logic

On this page, we will discuss how to solve coding deductive logic problem quickly, and faster ways to solve those problems.

**Definition:**Logical coding deduction is the process of reasoning from the statements to reach to certain logical conclusions. Deductive reasoning drives in the same direction of the conditions, and relations located with the conclusions. The decoding of any message depends on the understanding and interpretation of the audience member.

## How To Solve Coding Deductive Logic Questions:

Here are some ways to solve coding decoding logic questions quickly:

1. **Observe the given code:** Observe alphabets or numbers given in the code keenly.

2. **Find the pattern or sequence:** Try to find the pattern or sequence it follows whether it is ascending or descending.

3. **Detect the rule:** Detect the rule in the sequence.

4. **Classify the type:** Various types on which Coding and Decoding are classified are letter coding, substitution, mixed letter coding, and mixed number coding.

## Coding Deductive Logic Types

- **Letter to Letter Coding:** In this type, letters are replaced with other letters according to a specific pattern or rule.
- **Letter to Number Coding:** In this type, letters are replaced with numbers according to a specific pattern or rule.
- **Substitutional Coding:** In this type, a code is given for a word or phrase, and the code is used to substitute letters in other words or phrases.
- **LSN Coding:** In this type, letters are replaced with their corresponding positions in the English alphabet, and then the positions are replaced with their corresponding numbers in the sequence.
- **Conditional Coding:** In this type, a set of conditions is given, and based on those conditions, a code is created for a word or phrase.

## How To Solve Coding Deductive Logic- Alphabet Coding Deductive or Letter Coding

**Question 1:**

**In a certain code language, SECURE is coded as ERUCES, How is LIABILITY written in the same code language?**

**Options:**

A. LIBAYTILI
B. YTLIIBAIL
C. TYILIBAIL
D. LYTIAIILB

*Correct Answer: C*

*Explanation:*

All the alphabets used in the code are reversed. Therefore, according to the same code language LIABILITY will be coded as YTILIBAIL.

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How To Solve Questions on- Number Coding Deductive

**Question 1.**

**In a certain code language, BICYCLE is coded as 293253125, how is SCOOTER written in the same code language?**

**Options**:

A. 183151520617
B. 193151520518
C. 204161621715
D. 184151521517

### *Correct answer: B*

### *Explanation:*

[table id=693 /]

According to the table above the value under the alphabets are their codes. Therefore the code of SCOOTER on the basis of the table will be 193151520518.

**Question 2.**

**If A = 1*2, B = 2*2, C = 3*2........then KNOT is written as 120, how is DIVA written in the same code language?**

**Options:**

A. 82
B. 52
C. 72
D. 62

***Correct answer: C***

***Explanation:***

Given, A = 1*2, B = 2*2, C = 3*2…. Z = 26*2. Value of each alphabets is multiplied by 2.

Therefore, for DIVA,

D = 4* 2 = 8

I = 9* 2 = 18

V = 22* 2 = 44

A = 1* 2 = 2

8 + 18 + 44 + 2 = 72

How To Solve-  Mixed Letter Coding Deductive/ Deciphering Messages

**Question 1.**

**If 'kun fun dung' stands for 'honey and sweets'; 'sai dung fi hi' stands for 'sweets are loved' and 'nik dung di fug lo' stands for 'she cannot eat sweets,' what would 'dung' stand for?**

**Options:**

A. Honey
B. Sweets
C. And
D. Are

***Correct answer: B***

***Explanation:***

In all the three sentences, 'honey and sweets,' 'sweets are loved,' and 'she cannot eat sweets,' "sweets" is the common word. In all the three codes 'kun fun dung,' 'sai

dung fi hi,' and 'nik dung di fug lo,' "dung" is common. Therefore, "dung" stands for "sweets."

**Question 2.**

**In a certain language:**

**'248' stands for 'he is dead'**
**'381' stands for 'dead or alive'**
**'563' stands for 'sea or water'**

**Which digit stands for 'alive?'**

**Options:**

A. 4
B. 1
C. 8
D. 3

*__Correct answer: B__*

*__Explanation:__*

Common word in first and second sentence is 'dead' and common code is '8.' Therefore code for 'dead' is '8.' Common word in second and third sentence is 'or' and common code is '3.' Therefore, code for 'or' is '3.' So, in the second sentence only word 'alive' is left and code '1' is left. Thus code for 'alive' is '1.'

How To Solve Quickly- Coding by Substitution

**Question 1:**

**If lung is heart, heart is stomach, stomach is mouth, mouth is kidney, and kidney is leg, then from where we eat?**

**Options:**

A. Stomach

B. Mouth

C. Kidney

D. Leg

***Correct answer: C***

***Explanation:***

We eat from our mouth and in the question above it is clearly mentioned that mouth is kidney. Therefore, we eat from our kidney.

# Tips And Tricks And Shortcuts To Solve Coding Deductive Logic

## Coding Deductive Questions Tips and Tricks and Shortcuts

Here on this page quick and easy Tips And Tricks And Shortcuts are given to solve coding deductive logic quickly and competently in competitive exams. You will also get some of its types along with question and answers.
**Coding Deductive Logic:**

- Understand the given pattern or rule to easily encode or decode.
- Patterns in coding and decoding problems are typically consistent. Once you identify a rule, check if it holds true for other examples as well.

## Coding Deductive Logic Tips, Tricks and Shortcuts

Coding deductive logic is a process of reasoning from statements to reach certain logical conclusions. **Here are some commonly used tips and tricks given to solve the questions:**

- Constant adding and subtracting the position of the letters.

- Signifying the position of the letters in the alphabetical order.

- Adding the positions of the letters for making the code of different words.

- Adding and subtracting the position of the letters alternatively.

- Squaring the number of letters.

- Arrangement of the letters in alphabetical order.

- Interchanging the position of the letters.

- Constant adding and reversing the letters to form another word.

**Note:** Coding and Decoding carries substantial weightage in a number of examinations. These questions are there in a number of other recruitment exams as well. The idea and tactic to crack or solve them remain the same, only the level of complexity differs.

**There are 4 types of questions asked in exams:**

## Type 1: Alphabet Coding Deductive or Letter Coding

### Question 1.

**In a certain code language, MANAGEMENT is coded as TNEMEGANAM, How is QUALITY written in the same code language?**

**Options:**

A. TYLIUQ
B. YTILAUQ
C. UQLATYI
D. AUQILTY

### *Correct answer: B*

### *Explanation:*

All the alphabets used in the code are reversed. Therefore, according to the same code language QUALITY will be coded as YTILAUQ.

## Type 2: Number Coding Deductive

**Question 2.**

**In a certain code language, ADVANCE is coded as 4324169 and ROUND is coded as 80513, How NEEDED is written in the same code language?**

**Options**:

A. 133933
B. 193239
C. 199393
D. 105139

*Correct answer: C*

*Explanation:*

[table id=692 /]

According to the table above, NEEDED will be coded as 199393.

Type 3: Mixed Letter Coding Deductive/ Deciphering Messages

**Question 3.**

**If 'cpt way lin' stands for 'happy and sad'; 'my fin kil' stands for 'you are good' and 'sue fin le dim' stands for 'they are not friends,' what would 'are' stand for?**

**Options**:

A. Kil
B. Fin
C. Dim
D. My

*Correct answer: B*

*Explanation:*

In the 2nd and the 3rd statement 'you are good' and 'they are not friends,' 'are' is common and in their codes 'my fin kil' and 'sue fin le dim' 'fin' is common. Therefore, the code for 'are' is 'fin.'

Type 4: Coding by Substitution

**Question 4.**

**If brown is red, red is pink, pink is jam, jam is butter, butter is blue, and sky is milk, then what is the color of the blood?**

**Options**:

A. Red
B. Blue
C. Brown
D. Pink

*Correct answer: D*

*Explanation:*

The color of blood is red, and as given above in question, red is pink. Therefore, the color of the blood is pink.

**Question 5:**

**If animals are called humans, humans are called birds, birds are called fishes, and fishes are called fruits, then who lives in water?**

**Options:**

A. Fishes
B. Animals

C. Birds

D. Fruits

*Correct answer: D*

*Explanation:*

Fishes lives in water, and it is given in the question that fishes are fruits. Therefore fruits live in water.

# Blood Relation Important Formulas

## Blood Relation concept:-

Go through the entire page to know important rules and Formulas For Blood Relation problems.

Blood relation shows the different relations among the members of a family. Based on the information given, you are required to find the relation between particular members of the family.

**Types of questions on blood relation**Based on puzzles Keep in mind that from a person's name, we cannot judge the gender of that person. The name doesn't always show the gender beyond a reasonable doubt.

Blood Relation Important rules

**Note** – This method is copyright of PrepInsta, you will only find it on PrepInsta, using this method to solve will lead to copyright issue.

**Rules –**

- Use + or Male and (-) for female

- Imagine your family in the situation if you get stuck

- Keep same generations at same level

- Circles mean they are couple, i.e. husband and wife.

- Array means you're going down to next generation. i.e. A -> B means a is father or mother of B.
  - (+)A-> B means a is father of B.
  - (-)A-> B means a is mother of B.
- If you miss a generation due to no information provided then name them ? for time being
  - A is grandfather of C, will be (+)A -> ? -> C
- You also make circles and two ? if you think that later on couple relationship may be established
  - A is grandfather of C, will be (+)A -> (**inside Circle?/?inside Circle**) -> C (see example 1 for demo)
- Always give Initials for names i.e. R for Raman, Aj for Ajay and Ak for Akash.
- If there is no tight relationship(Mostly in case of in Law type questions which are complicated) use dotted arrays and to multiple relationships possible.

## Family Tree

# Some Questions Based On Above Formulas:

**Question 1:** John is Mary's son. Mary's husband is Paul. What is Paul's relation to John?
Answer:
Paul is John's father.
Explanation: Since John is Mary's son and Mary's husband is Paul, it means Paul is John's father.

**Question 2:** Sara's father's only daughter is Tina. Who is Tina to Sara?
Answer :
Tina is Sara herself.
Explanation: The question states that Tina is the only daughter of Sara's father.
Since Sara's father has only one daughter, that daughter must be Sara herself.

**Question 3:** Alex and Emma are siblings. Their mother is Lisa. What is Lisa's relation to Emma?
Answer:

Lisa is Emma's mother.

Explanation: Since Alex and Emma are siblings, they share the same mother, who is Lisa. Therefore, Lisa is Emma's mother.

**Question 4**:Tom and Jerry are cousins. Tom's father is Mike. What is Mike's relation to Jerry?

Answer:

Mike is Jerry's uncle.

Explanation: Tom and Jerry are cousins, which means they share a common grandparent. Since Tom's father is Mike, Mike is the father of Jerry's cousin (Tom), making him Jerry's uncle.

**Question 5:** Rachel is Lily's aunt. Rachel's brother is Mark. What is Mark's relation to Lily?

Answer:

Mark is Lily's father.

Explanation: Since Rachel is Lily's aunt, she must be the sister of one of Lily's parents. Rachel's brother is Mark, so Mark is Lily's father.

# How To Solve Blood Relation Questions Quickly

## How To Solve Blood Relation Questions Quickly:

This page will cover all you need to know on How To Solve Blood Relation Questions Quickly since time is the most important factor in any exam.

Before anything to go further deep always follow these steps –

- Apply to yourself – Try to solve the problem as yourself. e.g. Raman's Child's Daughter = My Child's Daughter

- Break and Build the Problem – e.g. My Child's Daughter = My Grand Daughter

- Don't assume Gender i.e. My Child's Daughter in this Child can be anything son or daughter

- If problem is complicate make Family Tree always(We will teach how to make family tree)How To Solve Blood Relation Questions Quickly.

## Best know how keywords

- **Spouse** – Husband or Wife

- **Sibling** – Brother or Sister(From own Parent)

- **Cousin** – In Indian terms Brother and Sister from Uncle/Aunt's)

- **Uncle** – Can be any of the following

  - Father's brother(Hindi – Chacha)

  - Mother's brother(Hindi – Mama)

  - Father's sister's husband( Hindi – Phupa)

  - Mother's Sisters Husband(Hindi – Mausa)

- **Aunt** – Can be any of the following

  - Father's Sister(Hindi – Bua)

  - Mother's Sister(Hindi – Mausi)

  - Father's brother's wife( Hindi – Chachi)

  - Mother's brothers Wife(Hindi – Mami)

Brother-in-law" and "Sister-in-law" can be any of the following

1. **Brother in Law**

   1. Brother of Spouse(Hindi – Saala)

   2. Husband of Sister(Hindi – Jija) Assume this if limited information is given

   3. Husband of Spouse's Sister(Hindi – Saala(Far off) For Blood Relation problem never consider this

2. **Sister in Law**

1.  Sister of Spouse( Hindi – Saali))

2.  Wife of brother(Hindi – Bhabhi),Assume this if limited information is given

3.  Wife of Spouse's brother ( Hindi – Saali(far off)) For Blood Relation problem never consider this

3.  **Maternal** – Mother's Side

4.  **Paternal** – Father's Side

## Family Tree Method to solve Blood Relations Questions quickly

Note – This method is copyright of PrepInsta, you will only find it on PrepInsta, using this method to solve will lead to copyright issue. **Rules –**

- Use + or Male and (-) for female

- Imagine your family in the situation if you get stuck

- Keep same generations at same level

- Circles mean they are couple, i.e. husband and wife.

- Array means you're going down to next generation. i.e. A -> B means a is father or mother of B.

  o  (+)A-> B means a is father of B.

  o  (-)A-> B means a is mother of B.

- If you miss a generation due to no information provided then name them ? for time being

  o  A is grandfather of C, will be (+)A -> ? -> C

- You also make circles and two ? if you think that later on couple relationship may be established

  o  A is grandfather of C, will be (+)A -> (**inside Circle?/?inside Circle**) -> C (see example 1 for demo)

- Always give Initials for names i.e. R for Raman, Aj for Ajay and Ak for Akash.

- If there is no tight relationship(Mostly in case of in Law type questions which are complicated) use dotted arrays and to multiple relationships possible.

**Let us learn from an example –**

**Ques. A is sister of B. C is the father of B. D is the wife of C and E is the father of D. How is E related to B?**

Ans. Now, basic approach that you may be following is let us assume I am B so A is my siter….. you will start like this. Now, this approach may work well in easy questions, but not work in following instances

- Doesn't work with long, lengthy and difficulty questions. Since, mind can't store a 3 level of great great grandfather and in laws type of relationships info (We did a survey average mind can only remember/apply logic to upto 6 relationships not more.

- Second case you will either assume yourself as male or female automatically, while in the question the person you applying your position logic to, may be of different gender than yours, so you will come at wrong outcome

In these cases Family Tree method works – Now let's look at the problem again.

**Ques. A is sister of B. C is the father of B. D is the wife of C and E is the father of D. How is E related to B?**
A is the sister of B consider this situation and lets come at outcomes

- A is female
- A is sister of B
- B's sex is unknown
- A and B's parents are unknown

All this info can be drawn in 5 seconds like we have done in the right hand side

C is the Father of B from this we get to know the following after adding to Family Tree

- C is male
- C is father of B
- C is also father of A
- Mother is still known

D is the wife of C from this we draw family tree and observe that −

- D is female
- D is mother of A and B

E is the father of D add to the diagram

- E is Male
- E is father of D

### *Example Tough Problem*

Saroj is mother-in-law of Vani who is sister-in-law of Deepak. Rajeesh is father of Ramesh, the only brother of Deepak. How is Saroj related to Deepak?

**Step 1**

Saroj is mother-in-law of Vani

**Step 2**

Vani who is sister-in-law of Deepak, Now two options are there, since sister in law can mean two things

- Deepak is Vani's Sister's Husband
- Deepak is Vani's Husband's brother

**Step 3**

Rajesh is father of Ramesh

**Step 4**

Ramesh is only brother of Deepak

Now, Deepak may be Vani's Sister Husband or Deepak maybe Vani's Husband's brother.

How is Saroj related to Deepak

Make a dotted diagram for both options above and lets check the options, option will have only one of the possibility

Options are – Mother, Sister and Grand Mother

For Case 2 i.e. Deepak maybe Vani's Husband's brother, Saroj is mother of Deepak. Hence Solved.

## *CONVERSATION OR STATEMENT BASED QUESTIONS:*
## Question 1:

**Rahul said, "Alia is the daughter of the sister of my father's only son."**

**How is Alia related to Rahul?**

   A. Daughter
   B. Niece
   C. Sister
   D. Mother

## *Correct Option: B*
## *Explanation:*

My father's only son → Rahul

Daughter of Rahul's sister → Niece

Hence, A is the niece of Rahul.

## Question 2:

**Pointing to Sarthak, Nidhi said, "His mother's brother is the father of my son Nikhil." How is Sarthak related to Nidhi?**

**Options**:

A. Wife's brother

B. Niece

C. Nephew

D. Nidhi's son

***Correct Option: C.***
***Explanation:***

Hence, Sarthak is the nephew of Nidhi.

# *PUZZLE BASED QUESTIONS:*
**Follow these symbols to avoid confusion.**

+ Male

− Female

——- The same generation, i.e., brother − sister, brother − brother, sister − sister

_____ Different generation i.e. mother − daughter, father − daughterCouple

(husband and wife)

## Question 1

**R is the father of K, but K is not his son. M is the daughter of K. S is the wife of R. G is the brother of K. H is the son of G. E is the spouse of G. A is the father of E. Who is the granddaughter of R?**

**Options:**

A. H

B. M

C. E

D. S

***Correct Option: B.***
***Explanation:***

M is the granddaughter of R because M is the daughter of K and K is the daughter of R.

## Question 2

**Read the information carefully and answer the question given below it.**

•A family consists of six members Priya, Qyra, Ronak, Xolo, Yatif, and Zen.

•Qyra is the son of Riya, but Ronak is not the mother of Qyra.

•Priya and Ronak are a married couple.

•Yatif is the brother of Ronak, Xolo is the daughter of Priya.

•Zen is the brother of Priya.

**Question:**

A. Who is the brother in law of Riya?

B. How many female members are there in the family?

C. How is Qyra related to Xolo?

D. How is Yatif related to Priya?

*__Explanation:__*

(Note, the question is solved by taking the initials of each name.)
We need to solve these question line by line.

1.  Qyra is the son of Ronak, but Ronak is not the mother of Qyra. It implies that Ronak is the father of Qyra.

2. Priya and Ronak are married couples. It means that Priya and Ronak are parents of Qyra.

3. Yatif is the brother of Ronak, Xolo is the daughter of Priya. It implies that Qyra and Xolo are brother and sister,

4. Zen is the brother of Priya.

Based on the information drawn,
A. Zen is the brother−in− law of Ronak

B. Two Priya and Xolo

C. Qyra is the brother of Xolo

D. Yatif is the brother − in − law of Priya.

Question 3

**Sam goes to New York, and there he meet Nancy, who is the sister of 'Sam's wife. How is 'Nancy related to 'Sam?**

Options:

A. Friend
B. Sister
C. Cousin
D. Sister – in – law

***Correct Option: D.***
***Explanation:***

Nancy is the sister- in – law of Sam as she is the sister of Sam's wife.

Hence option D is the correct one.

# *CODE BASED QUESTIONS:*

In Such type of questions, different relations are presented in the form of symbols like △, #, $, %, etc. (These are the most commonly used symbols.)

## Question 1

**Solve the question based on the symbols given.**

I + J means; I is the mother of J

I – J means; I is the brother J

I % J means; I is the father of J

I x J means; I is the sister of J

Which of the following shows that A is the maternal uncle of B

A. B – N + M * A
B. A + S * N – B
C. A – M + N * B
D. B – S % A

*Correct Option: C*
*Explanation:*

A -(→⊥brother ) M+(→⊥mother ) N *(→⊥sister ) B

## Question 2

**Read the information carefully and answer the following question?**

A © B means B is the brother of A

A = B means B is the sister of A

A & B means A is the son of B

A @ B means A is the Mother of B

What does the expression 'E @ F = G © H & I' say?

Options:

A. I is the husband of E

B. F is the son of I

C. E is the daughter of I

D. I is the wife of E

*Correct Option: A*
*Explanation:*

E□(→⊥mother ) F□(←⊥sister ) G □(←⊥brother ) H □(→⊥son ) I

Hence the expression 'E @ F = G © H & I' say that I is the husband of E

Therefore option A is the correct one.

## Question 3

**Read the information carefully and answer the following question?**

A # B means; A is the daughter of B

A © B means; B is the brother of A

A = B means; B is the sister of A

A & B means; A is the son of B

A * B means; A is the father of B

A @ B means; A is the mother of B

Which of the following indicates that 'E is the paternal uncle of A'?

Options:

A. E & D # B @ C © A

B. E & D & C @ B © A

C. A & C & B @ D © E

D. A & B # D @ C © E

***Correct Option: C***
***Explanation:***

A &(→⊥son ) C &(→⊥son ) B @(→⊥mother ) D©(←⊥brother ) E

Hence option C indicates that E is the paternal uncle of A.

# Tips And Tricks And Shortcuts For Blood Relation

## Tips and Tricks and Shortcuts to Solve Blood Relation Questions Quickly

Generally, three types of questions are being asked on blood relations namely:

- Puzzle based problems
- Problems based on conversations or certain
- Code based problems.

**Blood relation** in the context of aptitude tests or puzzles, "blood relations" often refers to questions that involve understanding and solving problems related to familial relationships based on given information.

# Tips and Tricks and Shortcuts for Blood Relations- Puzzle based Problems

In this mixed-blood relations will be mentioned. All we have to do is to find out the final association that is asked in the question by the connection between these relations.

Question. 1

**Amit and Balu are brothers and Cynthia and Dhara are sisters. Amit's son is Dhara's brother. How is Balu related to Cynthia?**

 *Explanation:*

Amit and Balu (+ male), Cynthia and Dhara (- female)

Therefore, Balu is the uncle of Cynthia.

Quick Tip:

In mixed-blood relation, we can use certain symbols to avoid confusion. The most convenient method to solve such questions is to draw a diagram based on the information given in the question. Let us understand it with an example.

Follow these symbols to avoid confusion.

# Blood Relations Tips and Tricks and Shortcuts- Conversation or statement based Problems

This is the most natural type of blood relation question, wherein one person explains the other person about the relationship between both of them by pointing to a third person or a picture.

Question. 2

**Pointing to a woman on the street, Rahul said, "The son of her only brother's wife's husband is the brother of my wife." How is the woman related to Rahul?**

### _Explanation:_

The questions say that "son of her (lady's) brother's wife's husband," i.e., lady's nephew is his wife's brother, so the son of her brother's wife's husband and brother of a wife are same. Therefore, Rahul is the son – in – law of the lady's brother. Based on that information we conclude that the lady is the sister of Rahul's wife's father or Rahul's father- in – law.

## Tips and Tricks and Shortcuts- Code-based problems:

In Such type of questions, different relations are presented in the form of symbols like  D, #, $, %, etc. (These are most commonly used symbols.)

Question. 3

**A D B means A is the mother of B**
**A $ B means A is the sister of B**
**A * B means A is the father of B**
**A # B means A is the brother of B**

**Which of the following means Is R the uncle of T?**

A. R*P#SDQ$T
B. S*P#R*U#T
C. P*R$Q$S*T
D. P*R$Q$S*T

## Explanation:

A. R*P#SDQ$T

R → P→ S→ Q→ T (R is grandfather of T)

B. S*P#the the R*U#T

S → P →R → U→ T (R is the father of T)

C. P*R$Q$S*T

P→ R → Q→ S → T (R is the uncle of T)

D. P*R$Q$S#T

P→ R→ Q →S → T (R is brother of T)

Hence, option C is the correct one.

### Question. 4

**James introduces a woman as the daughter of the only sister of his father. How is the woman related to James?**

Explanation : The woman is the daughter of James himself. This is because James's father's only sister would be James's aunt. So, the daughter of James's aunt would be James's own daughter.

### Question. 5

**A man is looking at a picture of someone. His friend asks, "Who is it that you're looking at?" The man replies, "Brothers and sisters, I have none. But that man's father is my father's son." Who is the person in the picture?**

Explanation:  The person in the picture is the man's son. The clue "that man's father is my father's son" indicates that the man is looking at a picture of his own son.

# Formulas For Directional Senses

Here , In this Page Formulas for Directional Sense are dIscussed, so that approaching towards those questions becomes easy for you .

Directional sense is an important cognitive ability that allows individuals to navigate and comprehend their surroundings effectively, which is essential for tasks ranging from basic wayfinding to complex navigation.

**Definition**We generally know Directions North , South , East  and West, We all are also aware about the 4 directions- North East, South East, South West, North West

## Important Facts about Directional Sense

Let us assume the front direction as North, back side as, South, Left side as Westside and right side as Eastside.

- We also know that, in Eastside, the sun rises and in Westside it sets. If we look to the sun, then our front is in the Eastside and our backside is in the Westside.
- Correspondingly, our left will be in Northside and our right is in Southside.
- **For solving these problems the foremost thing we need to remember is that every change in the direction of main side changes a 90 degree change.**
- For instance if a person moves from North side to Westside/Eastside there will be change in 90°. However the change among South and South east side or North and North-east will be 45° only.
- For solving these types of problems, we presumed all these distances among the specified points and along with straight lines.
- **Pythagoras theorem concept is used to solve the problems like this**.

## Concept of Pythagoras Theorem

It is a vital relation in Euclidean geometry between the 3 sides of a right triangle. It states that the sum of the squares of the other two sides is equal to the square of the hypotenuse( the side conflicting the right angle).

By Applying Pythagoras Theorem

$hypotenuse^{2} = Altitude^{2} + Base^{2}$

In given Figure C is length of hypotenuse , A is base and B is Altitude.

$C^{2} = A^{2} + B^{2}$

By applying the mentioned formula the directional problems can be solved easily.

These will be helpfull to Solve Many Problems of Directional Senses.

## Examples

**Question 1**: One morning Udai and Vishal were talking to each other face to face at a crossing. If Vishal's shadow was exactly to the left of Udai, which direction was Udai facing?

**Options**

A East

B West

C North

D South

**Solution :** North

**Question 2**: If Rajesh is facing west, and turn 90 degrees to his right which direction will be he facing?

**Options**

A East

B North

C South

D West

**Solution : North**

**Question 3**: If you're standing at point A which is in South and you want to go to point B, which direction should you move if point B is to the right of point A?

**Options**

A East

B West

C North

D south

**Solution: East**

**Question 4**: Ravi went to a park, and walked 25km towards North, then he turned right and walked 30 m , then he turned right and walked 35 m the  he turned left and and walked 15 km and finally turns left and walks 15 km. In which direction and how many meters is he  from the starting position?

**Options**

A 15 m West

B  30 m East

C  30 m West

D  45 m East

**Solution** 45m East


**Question 5:** Walking 15m North, Rahul turned towards right and walked for 30 m , then again turned left and walked 45 m and finally turned right . In which direction is he moving from his starting position?

**Options**

A  West

B  East

C  North

D  South

**Solution** East


# How To Solve Directional Senses Question Quickly

**How to Solve Directional Sense Questions Quickly in Logical**

This Page will cover all the details for How To Solve Directional Sense Questions Quickly.

Now, there are two methods rules

- Calculation method :- Generally used for easy questions

- Cheat Scale method :- Can solve difficult questions without difficulty, may not work for all problems

**Directions**There are two types of directions – 4 way direction (West, East, North, South) 8 way direction(North-West, West, South West, South, South East, East, North East, North)

Before going further make sure that you know Pythagorus Formula

**Hypotenuse$^2$ = Perpendicular$^2$ + Base$^2$**

Now, these facts should also be handy before going any further.

- An object's shadow will fall in to the west side, i.e. opp. side of sunrise(Sun rises in East)

- Similary, shadow will fall in east at sunset.

- At noon i.e. 12:00am, no shadow(Theoretically) will just fall vertically

## Calculation Method –

We will solve 2 questions for this, one easy and one hard. So, first you understand the concept and then you try that question yourself.

## Easy Question –

A car(walking at constant speed) starts walking towards north for 5 hours and then turns right and walks another 3 hour and turns right again and walks 9 hours.

In such questions where only hours are given and speed to constant so distance will linearly proportional to time travelled so time can be used as distance units

We think that the image is self explanatory –

Finally we will use Pythagorous theorem to calculate the distance(in red)

hypotenuse^{2} = Altitude^{2} + Base^{2}

= $(9 - 5)^2 + 3^2$

= $4^2 + 3^2$

= 25.

Thus Distance = \sqrt{25} = 5

## Cheat Scale Method

Lets say in the last question perpendicular was 29 and base 23.

In most exams you can carry, a pencil scale ;). Now, rather than calculating complicated under roots of such powers, use a scale to measure hypotenuse distance, for example in the last question just measure the red line.

- Use 1 hour as 1 scale distance while making exact diagram with scale
- If problem is complicated then use approximations for example in case of 43 consider 10 units as 1 scale centimetre and 4.3 cms will be our distance

## Degree based movement Questions

In such questions rather than giving – person turns left toward east than giving – person turns left, toward east. They provide information like person facing towards a direction turns x degrees in anti-clickwise direction.

For example – A person facing towards East turn 135 degrees in anti-clockwise direction will now be facing north west or i.e will be facing the middle of Quadrant 2.

The following diagrams gives anti-clock wise movement will be just opposite of it.

Below mentioned are the questions provided with the solutions to more understand the concepts.

## How To Solve Directional Sense Questions Quickly

Question 1.

**Santosh starting from her home, walks 4 km in the East, then she moves to her right direction and walks 3 km. to reach santosh's home what is the shortest distance?**

*Explanation:*

To find out the minimum distance among these points we need to apply the Pythagoras theorem. the smallest distance among will come by applying the formula: sum of the squares of the other two sides is equal to the square of the hypotenuse

Minimum distance = root square of 4 and 3

=Root of 25=5kms

Hence, the distance between the starting point to finish point is 5 kms.

Question 2.

**Temple ram is in the Northside of the temple Panna. The temple Radha is in the Eastside of temple ram. The temple Swaminarayan is to the left side of the temple Panna. In which direction is the temple Swaminarayan with respect to temple Radha?**

A. West
B. South-West
C. South
D. North-West

***Answer: B***

***Explanation:***

South-west

## Questions 3.

**A dog is looking for his mother. He travelled 90 metres in the Eastside before turning to his right. He went 20 meters before turning to his right again to look for his mother at his master's place 30 metres from this point. But dog's mother was not there. From this point he again ran 100 metres to the Northside before finding his mother in a road. What is the minimum distance among the starting point and his mother's position?**

A. 40 metres
B. 80 metres
C. 100 metres
D. 160 metres

***Answer: C***

***Explanation:***

The movement of the dog from A to E is as shown in figure.

Clearly, the dog meets his mother at E.

Now, AF = (AB − FB)

= (AB − DC) = (90 − 30) metres = 60 metres.

EF = (DE − DF) = (DE − BC)

= (100 − 20) metres = 80 metres.

So the total distance is = root of (square of 60 + square of 80), which will be 100 metres.

## Solve Quickly Directional Sense Questions: Right Direction/ Position of Shadow

Question 4.

**One morning after dawn, Pritesh was standing facing a rod. The shadow of the rod fell exactly to his right. To which direction was he facing?**

A. East
B. West
C. South
D. Data is inadequate

*Answer: C*

*Explanation:*

Sun rises in the east in the morning. Since the shadow of Pritesh falls to his right. So he is facing South.

Question 5.

**One evening previous to dusk Rashmi and Heena were conversing face to face with each other. If Heena's shadow was closely to the right side of Heena, so Rashmi was facing in which direction?**

A. North
B. South
C. East
D. Data is inadequate

***Answer: B***

***Explanation:***

The sun sets in Westside in evening time. So, any shadow will falls in the Eastside only. Since Heena's shadow was exactly to the right side of Heena. Hence Rashmi was facing towards South direction.

# Tips and Tricks and Shortcuts To Solve Directional Senses

Here, are quick and easy Tips and Tricks for Directional Senses for you to solve Directional questions in a fast and simple way.

## Tips and Tricks for Directional Senses.

Directions problems questioned in the exam are based on 2 principles-

- Distance
- Direction

There are mainly four directions – East, West, North & South and 4 types of cardinal directions such as North East, North West, South East, and South West as represented below

## Left and Right side Movements

- If a person is looking at northside, on making a move towards left will face to west direction and on making a move towards right will face to eastside.

- If a person is looking at west direction, on making a move towards left will face to southside and on making a move towards right will face to north.
- If a person is looking to east, on making a move towards left will face to north and on making a move towards right will face to south.
- If a person is looking to south, on making a move towards left will face east and on making a move towards right will face to west.

Hence, the above facts can be sum up as:

Every time an individual moves to her/his left side, he/she will move in the direction of anti- clockwise.

Every time an individual moves to her/his right side, he/she will move in the direction of clockwise.

**Message: if a question says to move towards left side or right side, we solve the problem by assuming the movement at an angle of 90 degrees.**

Type 1: Total distance covered or minimum distance among two places;

**Question 1.**

**Nagendra walked 20 m towards north. Then he turned right and walks 30 m. Then he turns right and walks 35 m. Then he turns left and walks 15 m. Finally he turns left and walks 15 m. how many metres is he from the starting position and in which direction?**

A. 15 m West
B. 30 m East
C. 30 m West
D. 45 m East

**Answer: D**

**Explanation:**

Clearly mentioned in the picture below: AF=BC+DE=45 meters and direction is east.

Type 2: Right Direction/ Position of Shadow

**Question 2.**

**A whale swims 20 meter towards East and turns Right, Swims 10 meter and turns to right, Swims 9 meter and again turns to left, swims 5 meter and then turns to left, again dips 12 meter and finally turns to left side and swims 6 meter. Now which in direction whale is facing ?**

A. East
B. North
C. West
D. South

**Answer: B**

**Explanation:**

Fish's direction can easily be find out by creating his movement on diagram.

**Question 3.**

**Santosh is facing east. First she turns 70° in clockwise and then 205° in the anticlockwise direction. Which direction Santosh is facing now ?**

A. North-East
B. North-West
C. South-West
D. South-East

**Answer: B**

**Explanation:**

When Santosh turns in clockwise direction 70 degree then she faces the south-East direction. Then again she turns 205 Anti – degree anticlockwise and now finally Santosh faces the North-West direction.

**Question 4.**

**One morning Rajesh and Prakash are Talking each other Such that they faces each other. The shadow of the Prakash fells exactly right of Rajesh. To which direction was Prakash facing?**

A. East
B. West
C. North
D. Data is inadequate

**Answer: C**
**Explanation:**

From image we see Prakash is facing North

**Question 5.**

**Reena is facing east. she turns 100° in clockwise direction and then 145° in the anticlockwise direction. Which direction she is facing now ?**

A. North-East
B. North-West
C. South-West
D. South-East

*Answer: A*

*Explanation:*

when it turns in clockwise direction 100 degree then it faces the south-west direction. Then again it turns 145 degree anticlockwise and now it faces the north-east direction.

# Formulas For Cube

## Formulas for Cube

In this Page Formulas for Cube is given. A cuboid having its length, breadth, height all to be equal in measurement is called as a cube.

**Note :** The topic of "Cubes" in logical reasoning often refers to a type of visual reasoning question. It involves mentally rotating a 3D cube or set of cubes in different ways to understand how the cube(s) would appear from different angles or after certain operations.

## Important Formulas for Cube

**1. For a Cube of side n x n x n painted on all sides which is uniformly cut into smaller cubes of dimension 1 x 1 x 1,**

- Number of cubes with 0 side painted = $(n-2)3(n-2)_3$
- Number of cubes with 2 sides painted = $12(n-2)12(n-2)$
- Number of cubes with 1 sides painted = $6(n-2)26(n-2)_2$
- Number of cubes with 3 sidess painted = 8(always)

**2. Rotation Formulas:**

**Single Rotations:**

- Clockwise Rotation by 90 degrees (x-axis):

  (x, y, z) -> (x, -z, y)

- Counterclockwise Rotation by 90 degrees

  (x-axis):

  (x, y, z) -> (x, z, -y)

- Clockwise Rotation by 90 degrees (y-axis):

  (x, y, z) -> (z, y, -x)

- Counterclockwise Rotation by 90 degrees (y-axis):

  (x, y, z) -> (-z, y, x)

- Clockwise Rotation by 90 degrees (z-axis):

  (x, y, z) -> (-y, x, z)

- Counterclockwise Rotation by 90 degrees (z-axis):

  (x, y, z) -> (y, -x, z)

**Combined Rotations:**

- Clockwise Rotation by 180 degrees (x-axis):

  (x, y, z) -> (x, -y, -z)

- Clockwise Rotation by 180 degrees (y-axis):

  (x, y, z) -> (-x, y, -z)

- Clockwise Rotation by 180 degrees (z-axis):

  (x, y, z) -> (-x, -y, z)

### 3. Hidden Face Formula:

If you need to determine the face opposite a given face (when the cube is unfolded), you can use this formula:

Opposite Face of F = F ± 3

Where F is the face number (1 for front, 2 for right, 3 for back, etc.). The ± sign indicates that you can add or subtract 3 to get the opposite face.

### 4. Percentage Formula:

When calculating percentages related to cubes, use the formula:

Percentage = $\frac{Part}{Whole} \times 100$

Where "Part" is the number of units in question (like the number of cells with a certain color or pattern), and "Whole" is the total number of units in the cube (total number of cells).

### 5. Counting Formula:

For counting specific attributes within a cube (like the number of cells with a particular color or pattern):

Count = Number of Units with Attribute

# Example for Cube Formulas

**Question 1:**

**A cube having an edge of 12 cm each. It is painted green on two opposite faces, blue on one other pair of opposite faces, black on one more face and one face is left unpainted. Then it is cut into smaller cubes of 1 cm each. Find the total no. of smaller cubes.**

**Solution:**

Total number of Smaller cubes = $\frac{12 \times 12 \times 12}{1 \times 1 \times 1}$ = 1728

**Question 2.**

**The no. of smaller cubes which are having two-faces painted.**

**Solutions:**

For 2 sides painted, we look for the edges.

A cube has 12 edges;
in which 8 edges each edge having 10 cubes will have 2 sides painted. (4 edges of

an unpainted side won't be included).

We'll also include those 4 cubes (which we didn't count while counting 3 colored sides, as they have 2 sides painted)

Cubes on 4 edges of the unpainted side of the cube will have 1 side painted (due to the unpainted side).

Therefore, total cubes with 2 sides painted= 8 x 10 + 4 = 84 cubes.

# How To Solve Cube Quickly

## How To Solve Cube Questions Quickly:-

Here in this Page How to Solve Cube Questions Quickly is given.

**Cube Definition**A cube is an even three-D shape image, having six equal squares. A Cube and dice are same by having total of 6 faces, 8 vertices and 12 edges.
**Note :**The 3 visible sides of cube at a single moment cannot be on the opposite side of each other.
Number of Edges = 12 Number of Vertex = 8 Number of Faces = 6

### Solve Quickly Cube Questions on : Alphabet & Number Cubes:

**Question 1: How many cubes can be formed from the given open image?**

A. 1 and 2

B. 1,2,3 & 4

C. Only 3

D. Only 4

**Answer:** option C

**Explanation:** As we see in the picture above, 5 is opposite to 6, 1 is opposite to 3, and 4 is opposite to 2, so 5 & 6, 1 & 3 and 4 and 6 cannot be together. Only option C follows this rule hence, it is correct.

**Question 2. Which digit will come opposite to face 2 if the below given figure is folded?**

A. 1

B. 4

C. 6

D. 2

**Answer:** option A

**Explanation:** As per the rules to solve the cube if we want to know the opposite to the face 2, then first we need to consider it as a base. Hence its opposite will be then 1 only.

## How To Solve Quickly Cube Question: Position of The CUBE

**Question 1.**

**Which option is correct if we fold a piece of the paper to make a cube?**

A. 2 only

B. 3 only

C. 4 only

D. 1, 2, and 3

**Answer:** option A

**Explanation:** As per the rules of cube, we know that if we fold the main image then F will be opposite to B, E will be opposite to C and A will be opposite to D. now looking to the option we can simply eliminate image 1, 3 and 4 because F and B, E and C and A and D cannot be together. Hence only image 2 is accurate.

**Question 2:** Select an option which is alike to the main box given?

1. A
2. B
3. C
4. D

**Answer:** option B

**Explanation:** As per the rules of cube of we fold main image, then K will be opposite to the triangle. The question mark will be opposite to the first blank side and divide sign will come opposite to another blank side. Option A and D does not follow this rule as in that both k and triangle are together. Further option C is also not possible because in that we need to exchanges the face position of cubes. Therefore only option B is accurate.

# Tips and Tricks and Shortcuts To Solve Cube questions

## Tips and Tricks and Shortcuts for Cube:-

In this Page Tips and Tricks to Solve Cube Questions is given.

**Definition**A cube is a three-dimensional shape, which has six equal squares. A Cube and dice have total of 6 faces, 8 vertices, and 12 edges. The 3 visible sides of cube at the same time can never be on the opposite side of each other.
**Note :**The topic of "cubes" in logical reasoning often refers to a type of visual reasoning question. It involves mentally rotating a 3D cube or set of cubes in different ways to understand how the cube(s) would appear from different angles or after certain operations.

## Direction for Tips and Tricks and Shortcuts for Cubes

A cube is cut in two equal parts along a plane parallel to one of its faces. One piece is then colored red on the two larger faces and green on the remaining, while the other is colored green on two smaller adjacent faces and red on the remaining. Each is then cut into 32 cubes of the same size and mixed up.
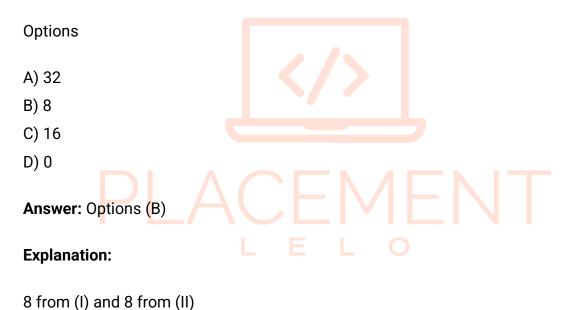
Tips and tricks to solve Rubik's Cube

Get a quality Rubik's Cube. The solving time depends on two things: you, and the cube. Let's focus on the other one: A Hard turning cube that stuck all the time will dramatically increase your solving time.

- In a cube the number of unit cubes = (side)3.
- The opposite sides of the cube can never be adjacent to each other.
- If two cubes are considered, and one of the two common faces is in the same position, then the remaining faces will be opposite to each other.

**Question 1: How many cubes have only one coloured face each ?**

Options

A) 32
B) 8
C) 16
D) 0

**Answer:** Options (B)

**Explanation:**

8 from (I) and 8 from (II)

Therefore 8 from each.

**Question 2: How many cubes have each one red and another green?**

Options

A) 0

B) 32

C) 16

D) 8

**Answer:** Option (D)

**Explanation:** 16 from (I) and 8 from (II)

**Question 3 : A cube is coloured red on all faces.It is cut into 64 smaer cubes of equal size.How many cubes have no face coloured?**

Options

A) 8

B) 16

C) 32

D) 64

**Answer:** Option(A)

**Explanation:** Since there are 64 smaller cubes of equal size,therefore n=number of divisions on the face of undivided cube=4

Number of cubes with no face coloured=$(n-2)3(n-2)3$

$=(4-2)3=8(4-2)3=8$

# Paper Cutting

## How to solve Paper Cutting Questions?

1. **Step 1:** Understand the Given Sequence: Carefully look at the sequence of diagrams, and note down the way how paper is folded and/or cut. Pay attention to the direction and orientation of the fold and cut.
2. **Step 2:** Visualize the Folding and Cutting Operations: Mentally visualize the folding and/or cutting pattern. Try to visualize how the paper will look at each step.
3. **Step 3:** Determine the Final Shape: After visualization of each step, determine the final shape. Pay good attention to the sides, and corners of the shapes.
4. **Step 4:** Compare your visualization of the final shape with the options provided in the question, and select the one that matches your result.
5. **Step 5:** Verify Your Answer: Cross-verify your answer, do double-check because a minor cut can play a big role in such types of questions.

# Paper Cutting: Non-Verbal Reasoning Questions and Answers

We will now discuss the paper-cutting-related questions with detailed solutions. By following the step-by-step guide, you will be able to solve any question related to paper cutting.

**Direction:** Each of the following questions consists of a set of three figures X, Y, and Z showing a sequence of folding of a piece of paper. Figure (Z) shows the manner in which the folded paper has been cut. These three figures are followed by four answer options from which you have to choose a figure that would most closely resemble the unfolded form of figure (Z).

Q 1. Choose the figure from 1, 2, 3, or 4 which closely resembles figure Z.

*Non-verbal Reasoning Questions*

Solution:
*Visualizing the cutting Z -> start unfolding the figure Z -> From Z, move to Figure Y -> Then move to figure X.*

Q 2.  Choose the figure from 1, 2, 3, or 4 which closely resembles figure Z.

Solution:

*When we unfold Z, try to keep an eye on the pointed side of the cut. As the pointed side is facing the center then in all 4 quarters it should point to the center.*

Q 3. Choose the figure from A, B,C, and D which closely resembles Figure Z.

Solution:

*Visualizing the cutting Z -> start unfolding the figure Z -> From Z, move to Figure Y -> Then move to figure X.*
*Keep and eye on the corner triangle, and on circle. These two will be present only on the two sides, then the central triangle will give a rhombus shape after opening.*
*Option D is the correct answer.*

Q 4. Choose the figure from 1,2,3 or 4 which closely resembles figure Z.

Solution:

*Refer the above image, from figure Z follow the arrows and keep on visualizing the figure in your mind.*
*You will find Option 1 is the right answer.*

Q 5. Choose the figure from 1,2,3 or 4 which closely resembles figure Z.

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Solution:

*Try following the corners and the middle of the sides. You will observe, the missing corners of the final square.*

*Option 1 is the Correct.*

Q 6. Choose the figure from A, B, C, and D that closely resembles the last figure Z after being cut.

**Solution:**

*When the paper is unfolded, we will witness 2 hearts. This rules out options C and D for the answer.*

*Since the paper was folded diagonally, the second heart must also be flipped vertically and rotated 90 degrees clockwise.*

*This further disqualifies option A for an answer. Option B is the correct answer.*

Q 7. Choose the figure from A, B, C, and D that closely resembles the last figure Z after being cut.

Solution:

*Visualize the image one by one as shown in the above image, you will easily be able to find the right answer.*

*Option C is the right answer.*

Q 8. Find a completely unfolded figure of Z.

Solution:

*Firstly, concentrate on circle, then from Z go to Y and X.*

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*Then concentrate on Center Rhombus.*
*Option 3 is the right answer.*
Q 9. A square sheet of paper is folded and cut as shown below in the question figures. How it will appear when open, choose the correct option.

*Non-verbal Reasoning Questions*

*Non-verbal Reasoning Questions*

Solution:
*By doing the careful examination, we can see there is no pattern at the corner. So, use the elimination method.*
*D is the right answer.*
Q 10. A triangular sheet of paper is folded and cut as shown below in the question figures. How it will appear when open, choose the correct option.

*Non-verbal Reasoning Questions*

Solution:
*In the last figure, we can visualize that pattern will be in center only and that too triangular figures only.*
*Option A is the correct answer.*

# Visual Reasoning Formulas

## Visual Reasoning Formulas and Concept

In this page we will talk about the Formulas for Visual Reasoning. Visual reasoning is the course which comes under non-verbal intelligence part. It mainly includes an analysis of visual information and the ability to solve related problems.

**How to answer questions of visual reasoning**For answering visual reasoning questions you need not require any language as solutions can be drawn by analyzing the pictures or specific patterns, those analysis of pictures in a correct manner is the basic Formulas For Visual Reasoning.

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# Visual Reasoning Formulas :

Visual reasoning involves analyzing visual information to identify patterns, relationships, and logical connections. While there may not be traditional mathematical formulas, there are concepts and strategies that can help you excel in visual reasoning.

## Types of Visual Reasoning :

**1. Series Problems (Non-Verbal):**

The questions under non-verbal series will be asked in a box on various patterns such as signs, codes, patterns, shapes and different images.

Classification Problems: Under classification problems few figures will be given to you and you need to identify the one which is different from the group. Identification of various patterns is the most important part of this problem.

**Mirror Images:** Mirror image is an image which we see in a mirror. These are the objects which are similar to another, but with the reversed arrangement. Further mirror images are divided into 5 parts such as:

- 
  - Number Mirror
  - Images
  - Letter Mirror Images
  - Geometric Mirror Images
  - Shape Images
  - Mixed Mirror Images

**2. Spotting out the embedded figure:**

An embedded figure is the image which hides them in some other images. In this a single image will be given which will be followed by 4 other images and similar image needs to be recognized.

**3. Completion of Incomplete Pattern:** This type of problems is also called as analogy problems. Under this all you need to do is comparison between two images. Few related figures will be given to you and you need to develop a new relationship chemistry based on the given figures.

**4. Water Images:** Water image is the reversed object which we get by turning the image an upside down. In this type the important thing which needs to remember is that the left side of the real image will be there at left side only and the right side of the real image will be at right only. There will not be any changes in the position of the main image but the image will change upside down.

## Concepts of Visual reasoning :

- **Symmetry:**
  - Reflectional Symmetry: Objects are symmetrical when they can be divided into two equal halves by a line of symmetry.
  - Rotational Symmetry: Objects have rotational symmetry if they can be rotated by certain degrees to coincide with their original position.

- **Geometric Shapes and Properties:**
  - Triangle Types: Equilateral, Isosceles, Scalene.
  - Quadrilaterals: Rectangle, Square, Rhombus, Parallelogram.

- **Proportional Relationships:**
  - Direct Proportion: When two quantities increase or decrease together at a constant ratio.
  - Inverse Proportion: When one quantity increases as the other decreases, and vice versa, while their product remains constant.

- **Number Patterns:**
  - Arithmetic Progression: A sequence where the difference between consecutive terms is constant.

- Geometric Progression: A sequence where each term after the first is found by multiplying the previous term by a constant.

- **Logical Connections:**
  - AND Logic: A logical operation that requires both statements to be true.
  - OR Logic: A logical operation that requires at least one of the statements to be true.
  - NOT Logic: A logical operation that reverses the truth value of a statement.

- **Transformations:**
  - Translation: Moving an object from one location to another.
  - Rotation: Turning an object around a fixed point.
  - Reflection: Flipping an object over a line to create a mirror image.
  - Scaling: Changing the size of an object while maintaining its shape.

- **Visual Puzzles and Patterns:**
  - Solving puzzles like Sudoku, tangrams, jigsaw puzzles, etc.
  - Identifying patterns in sequences, images, and shapes.

# Questions and Answers for Visual Reasoning

## Question 1 :

What would the 3D shape look like from above?

**Options:**

A.

B.

C.

D.

**Answer : A**

**Explanation:**

When looking from the above, height does not matter so the simplest thing to do is work out the outline of the shape. Once you have this you can see that it must be A which is a triangle with jagged edge.

**<u>Question 2 :</u>**

**a. A**
**b. B**
**c. C**
**d. D**
**e. E**

**Answers : D**

Each circle is divided into six portions; three pairs of identical shapes are located in opposite cells; the grey pieces rotate in a clockwise manner. All the inner parts rotate in a counter-clockwise direction. It is not easy to recognize the presence of the three pairs. However, one can reach the same conclusions using other clues. For instance, one may note that the same couple of shapes appear in the first and fourth items of the sequence, as is the case with the second and fifth items. It is only logical that the next item of the series will include two hearts, located in the right and left cells. This reasoning should lead us to narrow the possible answer to options (A) and (D). Figuring out the grey portions' pattern of movement leaves us with possible options (B) and (D). Combining these two conclusions, we're left with choice (D) as the only option to comply with this problem's reasoning.

**<u>Question 3 :</u>**

Choose the image that completes the pattern

**a. A**

**b. B**

**c. C**

**d. D**

**e. E**

**Answer : A**

The logic: The inner shape in one frame becomes the middle shape in the next frame; the central form becomes the outer shape in the next frame, and the external form becomes the inner shape two frames later.

Thus, the outer shape in the missing frame should be a square (just like the middle shape in the 5th frame), the central form should be a triangle (like the inner shape in the 5th frame), and the internal structure should be a diamond (like the outer shape in the 4th frame).

**Question 4 :**

Choose the correct three figures to complete the square.

**a. A**

**b. B**

**c. C**

**d. D**

**Answer : B**

**Explanation:**
All shapes move to the right one step each row, where the rightmost shape moves to the leftmost position. Also, for each shape, the blackened half alternates every row. Following this logic, we expect the order of shapes to be, from left to right – a

triangle, a circle and a square, with blackened halves similarly as they were in the second row.

## Question 5 :

Which of the following boxes should replace the question mark (?) to complete the pattern?

a. A
b. B
c. C
d. D
e. E

**Answer: E**

In this matrix, there are two rules:

The circle: Across a row (from left to right) the circle always remains in the same row but moves one column to the right in each successive frame. Down a column, in each frame, the circle is still in the same row but is in different columns.

The star: Across a row (from left to right) the star always remains in the same column but moves up one row in each successive frame. The star forever remains in the same row down a column but moves one column to the left in each succeeding frame.

(In the upper-right frame the star and circle end up in the same position and the circle covers the star).

We can eliminate the answer (A) because it is missing a circle. We can further eliminate answers (B) and (D), because the star is in the wrong position, and the answer (C) because it has the circle in the wrong place.

Therefore, we are left with the answer (E) choice as the only correct solution.

# How To Solve Visual Reasoning Quickly

## Solving Visual Reasoning Questions Quickly

### *Definition:*

**Visual reasoning contains the skills to recognize and analyze visual data and answer questions using visual reasoning**.

For instance: recognizing relationships, connections and dissimilarities between shapes and designs, knowing visual arrangements and connections among objects.

**Visual Reasoning**Visual reasoning Enables you to analyze and crack difficult questions without trusting upon language skills, Below mentioned are the questions provided with the solutions to understand the topic more

### Visual Reasoning How To Solve Question Quickly:

**Series Problems Under Visual Reasoning (NON-VERBAL)**

**Question 1: Out of the Problem Figure find out the right solution from the five choices given in the solution figure.**

A. I
B. II
C. III
D. IV
E. V

Answer: B
Explanation:

The shading part is rotating first 2 steps and then 3 steps in clockwise direction. Hence option B is correct.

## How To Solve Question Quickly- Spotting out The Embedded Figure

**Question 2: From the given figures,Select the one in which the Question figure is embedded**

**Options:**

- I
- II
- III
- IV

Answer: Option I

The question figure is embedded in Option I.

# How To Solve Visual Reasoning Questions- Completion of Incomplete Pattern

**Question 3: Among the given options,which figure will complete the question figure?**

**Options:**

- I
- II
- III
- IV

Answer: Option II

Explanation: We need bottom left of the quadrant to complete the question figure,So Option II satisfies the criteria.

## Solve Quickly Visual Reasoning Question:- Classification Problems

**Question 1**

**Five figures are given below. Four out of these five are alike in some way; however one figure is different from other. Find out that one?**

Options:

- I
- II
- III
- IV
- V

***Answer: V***
***Explanation:***

All the figures contain 3 lines, only W has four lines. Hence option V is correct.

## How To Solve Quickly Visual Reasoning Question on: Mirror Images

**Question 1.Select the option which closely looks like the mirror image of the specified combination?**

**INDIA**

Answer: II

Explanation:

Option II clearly follows the rules of alphabets or letter mirror image. Hence option II is correct.

## Solve Question on Visual Meaning Quickly- Water images

**Question 1. Pick the option which strictly looks like the water image of the given combinations.**

**WATER**

**Answer:** II

**Explanation:** As per the water image rule, the image does not change its position but it turns upside down. Option II clearly follows the rule.

# Tips And Tricks And Shortcuts For Visual Reasoning

## Visual Reasoning Tips and Tricks and Shortcuts

Under this page we will provide you many tips and tricks to clear your doubts about the topic and for solving visual reasoning questions in a quick and simple manner.

There are several types of questions which come under the examination. Details of the same are given below.

**Visual Reasoning**There are some certain tricks which is used to solve questions of visual reasoning and the tricks are given in this page.

## Tips and Tricks and Shortcuts for Visual Reasoning- Series Problems(NON-VERBAL)

**The questions under non-verbal series will be asked in a box on various patterns such as signs, codes, patterns, shapes and different images.**

**For example:** A same figure x will come again and again but there will be a change in the position of x. These types of problems contain four or five figure series. The examiner may ask to find out the incorrect pattern or missing series. What all you

need to do is identification of the changes in the figures and based on that answer the same. Let's understand the problem by below given sample.

**Question 1. Out of the Problem Figure find out the right solution from the five choices given in the solution figure.**

A. 1
B. 2
C. 3
D. 4
E. 5

**Answer:** D

**Explanation:** The lower short line rotates 90'o anti clock wise in each step while the upper short line rotates 90'o clock wise in alternate steps.

# Tips and Tricks for Visual Reasoning- Classification Problems

**Under classification problems, few figures will be given to you and you need to identify the one which is different from the group. Identification of various patterns is the most important part of this problem. Try to practice the different-2 patterns so that you can crack the questions easily.**

**Question 1. Five figures are given below. Four out of these five are alike in some way; however one figure is different from other. Find out that one?**

**Answer:** C

**Explanation:** In all the figures except figure c two lines are parallel to each other. Hence option C is correct.

# Visual Reasoning Tips and Tricks and Shortcuts- Mirror Images

**Definition:**

**Mirror image is an image which we see in a mirror. These are the objects which are similar to another, but with the reversed arrangement. In other words the image of an objects change its side such as left side of an object will show right side and right side of an object will show left side.**

**Further mirror images are divided into 5 parts mainly:**

**1) NUMBER MIRROR IMAGES:** In number mirror image problem number will change its side such as left side of a number will come in right side and right side of a number will come in left side. The mentioned picture will help you to understand more about the number images.

**Question 1.**

Select the option which closely looks like the mirror image of the specified combination?

33222

**Answer:** D

**Explanation:**

Option D clearly follows the above given number chart arrangement.

**Question 2.** Select the option which closely looks like the mirror image of the specified combination?

RIO

**Answer: B**

**Explanation:** Option B clearly follows the above given image chart arrangement.

**Question 3.** Select the option which closely looks like the mirror image of the specified combination?

**Answer:** A

**Explanation:** Figure A will clearly resembles the mirror image of the given figure.

# Formulas for Syllogism

## Formulas for Syllogism and Definition

Syllogism is one of the most frequently asked questions in the competitive exams. Formulas for Syllogism is given here on this page. Such type of questions contains two or more statements which may or may not have any connection with reality. Two or more conclusions follow these statements.
**Syllogism**A syllogism is a type of logical argument that consists of three propositions: two premises and a conclusion. These propositions are structured in a way that the conclusion is inferred from the premises.

## Syllogism Formulas To Solve Problems:

- Some + All= Some

- Some + Some= No Conclusion

- Some + No= Some Not

- No + No= No Conclusion

- No +All = Some Not Reversed

- No + Some = Some Not ( Reversed )

- Some Not/ Some Not Reversed + Anything= No Conclusion

- No + All = Some not Reversed

- All + Some = No Conclusion

- All + All= All

- All + No= No

# Formulas for Syllogism and Concept:

Note: For understanding the syllogism formulas it is important to understand below 4 points. Before stating further.

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## Universal Positive Statement:

Universal positive statement indicates something positive applicable to all the items in that category. This is represented by the letter 'A'. These statement begin with All, Every and Even.

## Universal Negative Statement:

It implies that it refers to that kind of statements, which are universal and giving a negative impression. These types of statements begin with No, None of the, Not a single etc. and are represented by the letter 'E'

## Particular Positive Statement:

These type of statements begins with some, any, a few and are represented by the letter 'I'.

## Particular Negative Statement:

These kinds of statements are represented by the letter 'O'. Some examples of this are:

- Some girls are not crazy
- Some files are not pencils
- Some M is not N
- Some Rohits are not Dhawans.
- Few vegetables are not green.

Since there is no specific formula for solving such type of questions, but it is suggested to take the help of Venn Diagrams.

All we have to do is, read the given statements and accordingly draw the Diagram step by step, on the basis of the given statements, and eventually derive a logical solution by these diagrams.

Question 1.

**Statement:**
**To give an elite education to their children, parents today are ready to pay any amount.**

**Conclusion:**
**I.  All parents are very rich these days**
**II. Parents are obsessed for perfect development of their children.**

A. Only conclusion I follows

B. Only conclusion II follows

C. Either I or II follows

D.Neither I nor II follows

E. Both I and II follows

 *Correct Answer: B*

 *Explanation:*

The statement points that people are motivated towards providing their children an elite education. All parents are rich or not, it is not mentioned in the statement. Hence, only conclusion II follows and I does not.

Question 2.

**Statement:**

**The average number of persons educated per family is 2 in urban areas whereas it is 1 in rural areas.**

**Conclusions:**

**I. The literacy rate in the rural areas is lower than in the urban areas.**
**II. Fewer people are educated in the rural areas as compared to those in urban areas.**

**Correct Answer: E**
**Explanation:**

Clearly both the statements can be induced from the statement. Hence both I and II follows

Question 3.

**Statement:**
**All the harmoniums are instruments.**
**All the instruments are flutes.**

**Conclusion:**
**All the flutes are instruments.**
**All the harmoniums are flutes.**

A. Only conclusion I follows
B. Only conclusion II follows
C. Either I or II follows
D.Neither I nor II follows
E. Both I and II follows

*Correct Answer: B*

*Explanation:*

The statement points that all harmoniums are instruments , and all instruments are flutes but the reverse is not true hence only conclusion 2 is correct

Question 4.

**Statement:**

**Some messages are whatsapp.**

**All Hikes are whatsapp.**

**All whatsapp are facebook.**

**Conclusion:**

**1. Some facebook are messages**

**2. All hikes are facebook**

**3. Some messages are hikes**

**4. Some message are facebook**

A. Only 1 and 2 follows

B. Only either 3 and 4 follows

C. Only 1 and either 3 or 4 follows

D. Only 1 2 and 4 follows

E. None of these

*Correct Answer: D*

*Explanation:*

Clearly the statement makes it obvious that there is no relation between messages and hike hence statement 3 is incorrect.

Question 5.

**Statement:**

**Some cups are pots**

**All pots are tubes**

**Conclusion:**

**Some pots are cups**

**Some tubes are cups**

A. Only conclusion I follows

B. Only conclusion II follows

C. Either I or II follows

D. Neither I nor II follows

E. Both I and II follows

***Correct Answer: E***

***Explanation:***

The statement points that some cups are pots hence some pots are also cups and all pots are tubes therefore, some tubes can be cup also , so both the statement are true

# How to Solve Syllogism Questions Quickly

## Different Methods to Solve Syllogism Questions Quickly

Solving Syllogism problems can be hard if you don't know the correct way, in Syllogism we have a two Assumption Statements followed by Logical Conclusion and we have to tell which logical conclusion(s) is(are) true based on the Assumption Statements. Go through this page to get an idea on How to Solve Syllogism Questions Quickly.

**Syllogism**A syllogism is a form of logical argument consisting of three propositions: two premises and a conclusion. The premises are statements or propositions assumed to be true, while the conclusion is a statement that logically follows from the premises.

# How to Solve Syllogism Questions Quickly

**There are three different methods to solve Syllogims which are −**

1. Verbal Method
2. Venn Diagram Method
3. Tick and Cross Method

## Verbal Method –

It's a very simple one, try to make logical deductions in your mind from Assumptions (Premises) and match which conclusion is true.

Example –

**Premises**

- All tigers are cats.
- All cats are animals.

From these, we can easily conclude that since all tigers are necessarily cats and all Cats are necessarily animals. So, all tigers are animals.

**Conclusion-** All Tigers are Animals.

## How to solve Syllogism Question quickly :

## Venn Diagram Method –

**There are four categories to remember to solve using Venn's Diagram.**

### *Rule 1 Syllogism:*

**Statement** – All A's are B
**Example** – All Mangoes are Fruits

Conclusions that can be made out.

**Conclusion 1** – Some A's are B or Some Mangoes are Fruits
**Conclusion 2** -Some B's are A or Some Fruits are Mangoes.

Now, the first conclusion may confuse you as we said All A's are B's and then we are concluding some A's are B's.

In Syllogism its not wrong to say some A's are B when you have a statement as All A's are B's, as –

Some A's are actually B or Some Mangoes are actually fruit. This is not a wrong information

## *Rule 2 Syllogism:*

- **Statement** – No A is B
- **Example –** No Tomatoes are Fruits

This has a direct conclusion are No A is B

## *Rule 3 Syllogism:*

These have these possible conclusions –

- **Statement –** Some A's are B
- **Example –** Some men are Engineers

These have these possible conclusions –

1. **Conclusion 1 –** Some A are not B
2. **Conclusion 2 –** All A are B.
3. **Conclusion 3 –** All B are A
4. **Conclusion 4 –** All A are B and all B are A.

**Now, Conclusion 1 is clear as if some men are Engineers then some may not be engineers (Check Image for Conclusion below Conclusion 2 two is a case when we for a sample set, only Engineers maybe allowed to do engineering. Similar of Conclusion 3 For Conclusion 4 both men and Engineers are same sample set i.e Sample Set(Men) = Sample Set(Engineers)**

## *Some handy How to Solve Syllogism Questions Quickly & Rules –*

- All+All = All
- All+No = No
- All+Some = No Conclusion
- Some+All = Some

- Some+No = Some Not

- Some+Some = No Conclusion

**If the conclusion provided in the question is in "Possibility" case then you must proceed as per the following rules:**

1. If All A are B => Some B are Not A is a Possibility.
2. If Some B are Not A => All A are B is a Possibility.
3. If Some A are B => All A are B is a Possibility & All B are A is a Possibility.

# Summary of Venn Diagram

**Note:** In a few questions drawing diagrams may be very cumbersome as you may have to draw 4 diagrams depending upon the possibilities arriving specially Rule 3 which has 4 possibilities.

## How to Solve Syllogism Questions Quickly
<u>Ticks and cross solves the problem of not having to create many diagrams.</u>

**Ticks** – They denote defined set
**Cross** – They denote undefined set

**Defined Set** – When all the elements of that set have to be known in order to define a particular premise.

**Undefined Set** – If all the elements of a set need not be known in order to make a particular statement

Each Syllogism Premise must be one of the four –

| Universal Affirmative | All As are Bs. |
|---|---|
| Universal Negative | No As are Bs. |
| Particular Affirmative | Some As are Bs. |
| Particular Negative | Some As are not Bs. |

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## Some Rules by Aristotle to solve Syllogism :

### *Checking if Conclusion is possible or not –*

1. When Counting total premises and conclusion they should be 3
2. If we encounter a situation where in both the premises are negative then no conclusion can be achieved.
3. If we encounter a situation where in both the particular(some is used) are negative then no conclusion can be achieved.
4. The middle term (common term of both premises) must be distributed at least once.

### *Checking nature of conclusion –*

1. If one premises is particular then conclusion will definitely be particular.
2. If one premises is negative then the conclusion will be negative.
3. A term that is not distributed in the premises cannot be distributed in the conclusion.

### **Learning with an Example –**

**Premises** –

- All parallelogram are four sided.
- Some parallelograms are square.

Question 1.

**Mentioned below are some statements followed by a conclusion in the options. Take the given statements to be true, even if they contradict to the commonly known facts, and determine the conclusions that logically follow the statements.**

**Statement:**
**1. All men are girls.**
**2. Some girls are students**

**Conclusion:**
**1. All girls are men**
**2. Some girls are not students.**

**Options:**

A. The only Conclusion I follows

B. Only Conclusion II follows

C. Either conclusion I or Conclusion II follows

D. Neither conclusion I nor Conclusion II follows

*Answer: D*

*Explanation:*

Since both, the conclusions contain the term girls so neither of them can follow.

Hence option D is the correct one.

Question 2.

**Statement:**
**1. All men are women.**
**2. All women are kids.**

**Conclusion:**
**1. All men are kids**
**2. Some men are not kids**

**Options:**

A. The only Conclusion I follows

B. Only Conclusion II follows

C. Either conclusion I or Conclusion II follows

D. Neither conclusion I nor Conclusion II follows

***Answer: A***

***Explanation:***

By looking at the statements, it is evident that since all men are women and all women are kids, hence we can say that all men are kids. Thus it would be wrong to say that some men are not kids. Therefore the only conclusion I follow the statement.

Therefore one can say that option A is the correct one.

Question 3.

**Statement:**
**1. All Roses are flowers.**
**2. No Orchid is Lotus**

**Conclusion:**
**1. No Orchid is a flower**
**2. Some Orchids are flowers.**

**Options:**

A. The only Conclusion I follows

B. Only Conclusion II follows

C. Either conclusion I or Conclusion II follows

D. Neither conclusion I nor Conclusion II follows

***Answer: C***

***Explanation:***

Here, the first statement is a universal positive statement, so the middle term 'Roses is forming the predicate is distributed twice. So the conclusion cannot be universal. Therefore, either conclusion I or II must be followed.

# How to Solve Syllogism Questions Quickly (Venn Diagram method)

Another easier way to solve syllogism questions is with the help of the Venn diagram.

All we have to do is, read the given statements and accordingly draw the Diagram step by step, by the given statements, and eventually derive a logical solution with the help of the final diagram.

It can be explained in a better way with the help of a couple of examples below:

## Question 1.

Mentioned below are some statements followed by a conclusion in the options. Take the given statements to be true, even if they contradict to the commonly known facts, and determine the conclusions that logically follows the statements.

**Statement:**
**1. No pen is coat.**
**2. No scales are pens.**

**Conclusion:**
**1. All scales are coat**
**2. Some scale is pen.**

Options:

A. The only Conclusion I follows

B. Only Conclusion II follows

C. Either conclusion I or Conclusion II follows

D. Neither conclusion I nor Conclusion II follows

**_Answer: D_**

**_Explanation_**

There are 3 possible cases

Since " No pen is coat" The diagram of pen and coat do not have any overlapping. Hence, they are apart. According to the second statement, since no scales are pens, the diagrams of scales and pen do not overlap.

**Case 1:** If no scales are pen, one possibility is there can be no scales which is coat also.

**Case 2:** There can be scales which is also coat. Hence a part of scales and coat overlap with each other.

**Case 3:** All coats can be a scales, as there is no statement which says this combination is not possible.

Therefore option D is the correct one.

Question 2.

**Statement:**
**1. Some Jack is Jill**
**2. Some Max is Jack**

**Conclusion:**
**1. Some Jill is Max**
**2. No Jill is Max**

Options:

A. The only Conclusion I follows

B. Only Conclusion II follows

C. Either conclusion I or Conclusion II follows

D. Neither conclusion I nor Conclusion II follows

***Answer: C***
***Explanation:***

By looking at the above diagram, it is evident that either conclusion I or conclusion II follow since the conclusion is forming a complementary pair.

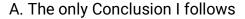Hence option C is the correct one.

## Question 3.

**Statement:**
**1. All men are strong**
**2. Arpit is a man**

**Conclusion:**
**Arpit is strong**
**Arpit is not strong**

Options:

A. The only Conclusion I follows

B. Only Conclusion II follows

C. Both conclusion I and Conclusion II follows

D. Neither conclusion I nor Conclusion II follows

***Answer: A***
***Explanation:***

In the first case, the statement " All men are strong " the Venn diagram of men is inside the Venn diagram of strong. In the second statement, since Arpit is a man, the Venn diagram representing Arpit should be inside man. In the second case, the only difference is, the first statement " All men are strong " the Venn diagrams of men and strong are overlapping with each other. Because that's another possibility. Since Arpit is men, it is represented inside it. Observing both the cases, we can agree that the conclusion given " Arpit is a strong " is true from both the case.

Hence, Correct option A is the correct one.

# Tips Tricks And Shortcuts To Solve Syllogism Questions

## Tips and Tricks to Solve Syllogism Problems

The syllogism is kind of a logical argument, where we have to give a genuine reason to arrive at a conclusion, which is based on two or more statements that are mentioned in the question.Go through this page to learn Tips and Tricks to Solve Syllogism questions quickly.
**Syllogism Tips**Here we have to keep a note of one thing that all the statements mentioned in the question should be considered valid, even though they are far from reality.

## Shortcut, Tips and Tricks of Syllogism to remember

Since Syllogism comprises of some statements, each of which is divided into two parts that are a subject and a predicate.

**Subject**– a Main matter of discussion.
**Predicate**– the part which states something about the subject.

There are four types of statements, each of which is mentioned below with the help of an example:

## Type 1: All P is Q

**<u>It can be portrayed with the help of a Venn diagram:</u>**
**From this we can definitely conclude that:**

- All P's are Q's

- Some P's are Q's

- And some Q's are P's

**But we cannot be sure that:**

- All Q's are P's

- Some Q's are not P's

# Type 2: No P's are Q's

**From the diagram we can definitely conclude that:**

- Some P's are Q's

- Some Q's are P's

**Possible conclusion:**

- All P's are Q's

- All Q's are P's

- Some P's are not Q's

- Some Q's are not P's.

# Type 3: Some P's are Q's
**From the diagram we can definitely conclude that:**

- Some P's are Q's

- Some Q's are P's

**Possible conclusion:**

- All P's are Q's

- All Q's are P's

- Some P's are not Q's

- Some Q's are not P's.


**Hence from the above diagrams we've summarized some quick Tips and Tricks to be memorized, to Solve Syllogism questions:**

**Definite cases: (For questions containing only two items)**

1. All+ All= All

2. All+ No= No

3. All+ Some= No conclusion

4. Some+ All= Some

5. Some+ No= Some Not

6. Some+ Some= No conclusion

**Possible cases:**

1)If all P's are Q's that does not mean that all Q's are P's which means that some Q's cannot be P.

All P's are Q's—->Some Q's are not P's

2)If some Q's are not P's——->There is possibility that all P's are not Q's

3)If some P's are Q's——->There is possibility that all P's are Q's and all Q's are P's

# Shortcut, Tips and Tricks to Solve Syllogism using various methods:

**1.) Verbal Method**

Test takers relatively less use the verbal way of explaining syllogism questions. The test taker understands the set of premises and based on the ability to understand the assumptions, verbally derives a conclusion. The method is useful for less complicated questions.

## For example

Statement I: Some human is rich.

Statement II: All rich are men.

## Conclusion:

1. Some human is a man.

2.All men are rich.

## Options:

1. The only Conclusion I follows
2. Only Conclusion II follows
3. Either conclusion I or Conclusion II follows
4. Neither conclusion I nor Conclusion II follows

**Answer:**1

## Explanation:

From the above statements it is clear that some humans are rich and all rich are man, therefore there is a possibility that some some humans are man.

## 2.) Venn Diagram method

The Venn diagram method allows the test taker to solve the questions diagrammatically. This method is very useful in solving syllogism questions. This is illustrated well with the help of some bullet points mentioned below:

- Firstly we have to draw the diagram based on the given statements.
- Then we have to check which conclusion follow the given information, with the help of the diagram.
- If the Conclusion is fulfilling one condition but is not accomplishing the other conditions represented in the diagram, then it will not be considered as a conclusion.
- Hence the final conclusion should be made only if it follows all the possible conditions.

## For example

Statement I: All P's are Q's

Statement II: All Q's are R's

Statement III: Some R's are S

## Conclusion:

1. All P are R
2. No Q are R
3. All S are R

## Options:

1. The only Conclusion I follows
2. Only Conclusion II follows
3. Either conclusion I or Conclusion II follows
4. Neither conclusion I nor Conclusion II follow**s**

**Answer:**1

**Explanation:**

The last diagram is the final one, and based on this we will draw conclusions.

## Conclusion:

- All P are R
- No Q are R
- All S are R

Conclusion 1 is true as Circle representing P is completely inside circle representing R

Conclusion 2 is false as circle representing Q is completely inside circle representing R.

Therefore there is no possibility that no Q are R.

Conclusion 3 is also not true because some part of S is some part of R.

Therefore we can say that only conclusion 1 follows.

Hence option 1 is the correct one.

For **Example**

**Statements :**

No singers are actors.

Some actors are artists.

No artist is artisan.

**Conclusions :**

I. Some artists are not singers.

II. Some artisans are not actors.

**Options**

1.Neither conclusion I nor conclusion II follows

2.Only conclusion I follow

3.Only conclusion II follow

4.Both the conclusions follow

**Explanation** :

Analyzing Conclusion I : Some artists are not singers.

Some artists are actors (reverse of Statement 2) + No actor is singer (reverse of Statement 1)

= Some artists are not singers. Clearly, Conclusion 1 follows.

Analyzing Conclusion II :

Some actors are artists + No artist is artisan

= Some actors are not artisans. Since reverse of an Partial Negative statement is not possible, Conclusion 2 doesn't follow.

For Example

**Statements :**

All wells are rivers.

All seas are rivers.

Some rivers are not seas.

**Conclusions :**

I. Some wells are not seas.

II. Some seas may not be rivers.

**Options**

1.Neither conclusion I nor conclusion II follows

2.Only conclusion I follow

3.Only conclusion II follow

4.Both the conclusions follow

**Explanation:**

Analyzing Conclusion I : Some wells are not seas.

Neither Statement 1 nor 2 is a negative statement.

So, negative conclusion between the classes of 'wells' and 'seas' is not possible.

Hence, Conclusion 1,doesn't follow.

Analyzing Conclusion II : Some seas may not be rivers.

In Statement 3 : 'Some rivers are not seas'. Here, we are not sure of the elements of the class 'seas'. So, it means that 'Some seas may not be rivers'.

Conclusion 2, hence, follows.

# Formula For Data Sufficiency

## Formula for Data Sufficiency and Definitions

Important Formula for Data Sufficiency is given here on this page. In data sufficiency, questions are framed to examine students reasoning, logical and decision-making skills. For this, you must read the questions properly and based on the information given in the options you have to decide whether the information is sufficient to answer or not.

**Note**The questions could vary from blood relation to mathematical calculations and sometimes coding and decoding problems.

## Understanding Solution Selections:

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For solving data sufficiency questions you need to first understand the question and based on that, selection should be made. The questions will be asked with certain information with two statements labeled I and II. You need to analyze whether the information given in the label I and II is adequate to come to the solution or not. You should use all the data given in the statements along with your mathematics skill and well-known facts (such as sun rises in the east or the meaning of niece), the selection is to be made from below given options:

The answer can be obtained from Statement I alone but statement II alone is not sufficient to answer the question asked;

A. Data in statement 1 is sufficient alone to determine the answer.

B. Data in statement 2 is sufficient alone to determine the answer.

C. Data in either of the statements is sufficient to determine the answer.

D. Data provided in both the statements together are not sufficient to determine the answer.

E. Data in both statements are required to determine the answer.

**Note:** In data sufficiency problems, you can mark as "the data given in the statements is satisfactory" only when there is outcome or solution is in the numerical value.

Question 1.

**Who is the father of A.**
**Statement I: x and y are brothers.**
**Statement II: y's wife is the sister of A's wife.**

A. Data in statement 1 is sufficient alone to determine the answer.

B. Data in statement 2 is sufficient alone to determine the answer.

C. Data in either of the statements is sufficient to determine the answer.

D. Data provided in both the statements together are not sufficient to determine the answer.

E. Data in both statements are required to determine the answer.

**Answer: D**

**Explanation:**

The statement I gives the relation between X and Y. So statement I alone cannot determine the answer. Through statement II we can determine that Y is the brother-in-law of A. Thus using both the statements you cannot determine the father of A. hence option D is correct.

Question 2.

**In which year was Dhoni born?**

**Statement :**

**At present Dhoni is 21 years younger to his father.**

**Dhoni's brother, who was born in 2001, is 28 years younger to his father.**

1. **1 alone is sufficient while 2 alone is not sufficient**
2. **2 alone is sufficient while 1 alone is not sufficient.**
3. **Either I or II is sufficient**
4. **Neither I nor II is sufficient**
5. **Both I and II are sufficient**

**Answer: Both 1 and 2 are sufficient**

**Explanation –**

From both I and II, we find that Dhoni is (28 − 21) = 7 years older than his brother, who was born in 2001. So, Dhoni was born in 1996.

Question 3.

**What will be the total weight of 80 books, each of the same weight ?**

**Statements:**

**One-fourth of the weight of each book is 5 kg.**

**The total weight of three books is 20 kilograms more than the total weight of two books.**

1. **I alone is sufficient while II alone is not sufficient.**
2. **II alone is sufficient while I alone is not sufficient**

3. **Either I or II is sufficient**
4. **Neither I nor II is sufficient**
5. **Both I and II are sufficient**

**Answer: Either 1 or 2 is sufficient**

**Explanation** –

From I, we conclude that the weight of each book = (4×5) kg = 20 kg.

So, total weight of 10 books = (20 x 10) kg = 200 kg.

From II, we conclude that:

Weight of each book = (weight of 3 book) − (weight of 2 book) = 20 kg.

So, total weight of 10 books = (20 x 10) kg = 200 kg.

Question 4.

**How many children does Mahi have ?**

**Statements:**

**Harsha is the only daughter of Y who is the wife of Mahi.**

**Karan and Jivan are brothers of Mahi.**

1. **I alone is sufficient while II alone is not sufficient**
2. **II alone is sufficient while I alone is not sufficient**
3. **Either I or II is sufficient**
4. **Neither I nor II is sufficient**
5. **Both I and II are sufficient**

**Answer: 1 alone is sufficient**

**Explanation** –

From I, we conclude that Harsha is the only daughter of Mahi. But this does not indicate that Mahi has no son. The information given in II is immaterial.

Question 5.

**How much was the total sale of the shop ?**

**Statements:**

**The shop sold 2500 units of masks each costing Rs. 15.**

**This company has no other product line.**

1. **I alone is sufficient while II alone is not sufficient**
2. **II alone is sufficient while I alone is not sufficient**
3. **Either I or II is sufficient**
4. **Neither I nor II is sufficient**
5. **Both I and II are sufficient**

**Answer: Either 1 or 2 is sufficient**

**Explanation –**

From I, total sale of 8000 units of masks = Rs. (2500 x 15) = Rs. 37500.

From II, we know that the company deals only in masks

This implies that sale of masks is the total sale of the shop, which is Rs. 37500.

# How to Solve Data Sufficiency Problems Quickly

## Solve Data Sufficiency Questions

This page here on provides information on How to Solve Data Sufficiency Problem Quickly.

**Definition**Data sufficiency is a concept used in various aptitude tests.It assesses your ability to determine whether the information provided in a set of statements is sufficient to answer a specific question.
**Note**The best way to understand Data Sufficiency is by going through its solved questions. Reasoning is all about more and more practice. Here are a few solved Questions to help you in a better way.

How to Solve Data Sufficiency Rule 1:

- Analyse The Given Data. Don't Jump Into It To Solve

**Question 1.**

**What is Sapna's rank in the class?**

**I. There are 35 students in the class.**

**II. There are 7 students who have scored less than Sapna.**

A. if the data in statement I alone are sufficient to answer the question;

B. if the data in statement II alone are sufficient to answer the question;

C. if the data either in I or II alone are sufficient to answer the question;

D. if the data even in both the statement together are not sufficient to answer the question;
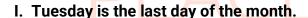
E. if the data in both the statements together are needed.

**Answer: E**

**Explanation:**

Out of 35 students 7 are behind of Sapna, means Sapna's rank is 28th in the class. Hence both statements are required to solve this.

**Question 2.**

**What day is the fifth of a given month?**

**I.  Tuesday is the last day of the month.**

**II. The third Monday of the month was eighth.**

A. if the data in statement I alone are sufficient to answer the question;

B. if the data in statement II alone are sufficient to answer the question;

C. if the data either in I or II alone are sufficient to answer the question;

D. if the data even in both the statement together are not sufficient to answer the question;

E. if the data in both the statements together are needed.

**Answer: B**

**Explanation:**

Statement 2 clearly answers that fifth day is Friday, hence option B is correct.

**Question 3.**

**When can Hardeep get next flight for Rajkot from Delhi if it is 7.00 pm?**

**I.  Flights for Rajkot leave after every 45 minutes, till 09 p.m.**

**II. Twenty-five minutes ago, one flight has left for Rajkot.**

A. if the data in statement I alone are sufficient to answer the question;

B. if the data in statement II alone are sufficient to answer the question;

C. if the data either in I or II alone are sufficient to answer the question;

D. if the data even in both the statement together are not sufficient to answer the question;

E. if the data in both the statements together are needed.

**Answer: E**

**Explanation:**

By reading both the statements, it clearly represents that first flight left before 25 minutes only, hence the next flight will leave by 7.20 which can be identified by having both the options hence, option E is correct.

How to Solve Data Sufficiency Rule 2:

- Represent The Blood Relation Or Coding-Decoding Problems On Paper To Easily Process It

**Question 4.**

**How is Beta related to Chitra?**

**I.  Alpha and Beta are brothers and Chitra and Drishti are sisters.**

**II. Alpha's son is Drishti's brother.**

A. if the data in statement I alone are sufficient to answer the question;

B. if the data in statement II alone are sufficient to answer the question;

C. if the data either in I or II alone are sufficient to answer the question;

D. if the data even in both the statement together are not sufficient to answer the

question;

E. if the data in both the statements together are needed.

**Answer: E**

**Explanation**:

By using the above notations we can draw the below diagram. Alpha, Beta is taken '+' and Chitra, Drishti is taken as '-'. It seems that Alpha, Beta belongs to one generation and Chitra, Drishti belongs to another generation.

So, Alpha, Beta is taken in one horizontal row and Chitra, Drishti is taken in another horizontal line. It says that Alpha is Chitra's father. Father's brother is an uncle. So, the answer is uncle.

**Question 5.**

**What is the mathematical code for 'coconut' in a certain code?**
**I.  The code for 'give me coconut' is '777'.**
**II. The code for 'you can bring coconut for me' is written as '673196'.**

A.  I alone is sufficient while II alone is not sufficient

B.  II alone is sufficient while I alone is not sufficient

C.  Either I or II is sufficient

D.  Neither I nor II is sufficient

E.  Both I and II are sufficient

**Answer: D**

**Explanation:**

Statement 1 and 2 both do not contain clear information to answer the code of coconut hence, option D is correct.

Give me coconut =777

You can bring coconut for me 673196

7 is common for coconut/me=? Cannot be determined

**Question 6.**

**Who among Parul, Query, Tanmay, Vimal, and Monty is exactly in the center when they are in rising order of their heights?**
**I.  Vimal is taller than Query but shorter than Monty.**
**II. Tanmay is taller than Query and Monty but shorter than Parul.**

A.  I alone is sufficient while II alone is not sufficient
B.  II alone is sufficient while I alone is not sufficient
C.  Either I or II is sufficient
D.  Neither I nor II is sufficient
E.  Both I and II are sufficient

**Answer: Option E**

**Explanation:**

Please refer to the diagram.

How to Solve Data Sufficiency Rule 3:

- Do Not Assume Anything By Your Own Knowledge. Make Assumptions With The Information Provided In The Given Statements

**Question 7.**

**On which day in April is Rahul's birthday?**
**I.  Rahul was born exactly 30 years after his mother's born.**
**II. His mother will be 50 years 5 months and 9 days on August 20 this year.**

A. if the data in statement I alone are sufficient to answer the question;
B. if the data in statement II alone are sufficient to answer the question;

C. if the data either in I or II alone are sufficient to answer the question;

D. if the data even in both the statement together are not sufficient to answer the question;

E. if the data in both the statements together are needed.

**Answer: E**

**Explanation:**

Statement 1 and 2 both contain information to answer Rahul's birthday hence, option E is correct.

**Question 8.**

**How many guests saw the trade fair yesterday?**
**I.  Up to three persons can enter having one entry pass with him/her.**
**II. Total, 333 passes were sold yesterday.**

A. if the data in statement I alone are sufficient to answer the question;

B. if the data in statement II alone are sufficient to answer the question;

C. if the data either in I or II alone are sufficient to answer the question;

D. if the data even in both the statement together are not sufficient to answer the question;

E. if the data in both the statements together are needed.

**Answer: D**

**Explanation:**

Statement 1 and 2 both do not contain clear information to answer the number of guests, who saw the fair hence, option D is correct.

**Question 9.**

**On Tuesday how many milk packets were sold?**
**I.  It was 20% more than the milk packets sold on the earlier day i.e., Monday.**

**II. Every alternate visitor to the shop purchased the milk packets and 2500 visitors were there on Monday.**

A. if the data in statement I alone are sufficient to answer the question;

B. if the data in statement II alone are sufficient to answer the question;

C. if the data either in I or II alone are sufficient to answer the question;

D. if the data even in both the statement together are not sufficient to answer the question;

E. if the data in both the statements together are needed.

**Answer: E**

**Explanation:**

Statement 1 and 2 both contains information to answer the number of milk packets sold i.e. 1500 hence, option E is correct.

How to Solve Data Sufficiency Rule 4:

- Practice Venn Diagrams As Much As You Can

**Question 10.**

**Out of the 100 animals in the Omaha zoo, how many are lions?**
**I.  60 of 100 are newly born elephants (Calf).**
**II. 20 animals out of 40 are not elephant but a lion.**

A.  I alone sufficient while II alone not sufficient to answer.

B.  II alone sufficient while I alone not sufficient to answer.

C.  Either I or II alone sufficient to answer.

D.  Both I and II are not sufficient to answer.

E.  Both I and II are necessary to answer.

**Answer: D**

**Explanation**:

As we see in the Venn diagram, statement A gives information about 60 baby elephants out of a total of 100 animals. Further statement B talks about 20 animals that are a lion but does not give information about the remaining 20. They may be a lion or any other animal also. Hence both the statements are not capable to provide an exact number of lions. Thus option D is correct.

**Question 11.**

**There are 60 children admitted to a Music Academy. Some children can play only Guitar and some can play only Sitar. How many children can only play Sitar?**
**I. 15 children can play both Guitar and Sitar**
**II. The total number of children who can play Guitar is 27**

A.  if the data in statement I alone are sufficient to answer the question;

B.  if the data in statement II alone are sufficient answer the question;

C.  if the data either in I or II alone are sufficient to answer the question;

D.  if the data even in both the statements together are not sufficient to answer the question;

E.  If the data in both the statements together are needed.

**Answer: E**

**Explanation**:

Statement 1 gives information about common students for Guitar and Sitar. Now, statement 2 talks about the total number of children who can play Guitar is 27. Thus by using both the statements, we can conclude that:

27 − 15 = 12 children can only play Guitar; 60 − 12 = 48 children can play Sitar

Student for only sitar=48 − 15 = 33

Hence 33 students can only play Sitar which comes from both the statements. Hence option E is correct.

# Tips and Tricks and Shortcuts for Data Sufficiency

## Tips and Tricks for Data Sufficiency

Learn Tips and Tricks and Shortcuts for Data Sufficiency through this page.

**Definition**Data Sufficiency is a type of question commonly found in standardized tests, aptitude exams, and assessments that evaluate a person's ability to analyze information, make decisions, and draw conclusions based on a limited set of given data.
**Note**In data sufficiency problems, the information given in the statements is sufficient, when it is possible to determine exactly one numerical value as an answer for the problem.

Tips and Tricks and Shortcuts for Data Sufficiency:-

There are a few tips and tricks which can be followed to solve the data sufficiency questions. Candidates can refer to these tips given below:

- **Read Carefully**: Take your time to read the entire question carefully. These questions can be lengthy, but it's important not to panic and ensure you understand all the information provided.

- **Verbal Solution**: Some data sufficiency questions, especially in the quantitative aptitude section, can be solved verbally without complex calculations. Try to reason through the conditions before jumping into calculations.

- **Focus on Conditions**: Your goal is not to find the final answer in most cases, but to determine whether the given data is sufficient to answer the question. Concentrate on which conditions are necessary to reach the answer.

- **Avoid Assumptions**: Only consider the information provided in the question. Avoid making any assumptions or using external knowledge. The given data is all that you should use to solve the question.

- **Step-by-Step Approach**: Start by attempting to solve the question using the first condition provided. If it's not sufficient, move on to the second condition, and so on, until you can determine if the data is sufficient or not.

**Objective**The main objective of data sufficiency questions is to assess your logical reasoning skills and your capability to determine whether the given data is sufficient to answer a specific question, without actually solving the problem completely.

## Tips and Tricks and Shortcuts for Data Sufficiency :-

Step 1- Examine the Question properly

Step 2- Consider each statement individually

Step 3- Combine the two statements

Directions for data sufficiency questions (1-3):

A.  If data in the  statement I alone is sufficient to answer the question.
B.  If data in the statement II alone is sufficient to answer the question.
C.  If data either in the statement I alone or statement II alone are sufficient to answer the question.
D.  If data given in both I & II together are not sufficient to answer the question.
E.  If data in both statements I & II together are necessary to answer  the question.

## Question 1

**Who is taller among P, Q, R, S & T?**
**(I) S is shorter than Q. P is shorter than only T.**
**(II) Q is taller than only S. T is taller than P and R.**

**Correct Option: C**

**Explanations:**

From I : P is shorter than only T, this means that P is taller than all Q, R & S, so T is tallest.

From II : Q only taller than S, so S is shortest, and Q is second shortest, Now T taller than P and R both, So tallest of all.

Question 2

**What is the distance between point P and point Q?**
**(I) Point R is 10 m west of point P and point S is 10 m north of point P.**
**(II) Point Q is 10 m south-east of point R. Point S is 20 m north-west of point Q.**

**Correct Option: D**

**Explanations:**

From I : No relation between points P and Q
From II : In this since we don't know the angles between sides of triangle forming with points PQS and PQR, PQ cannot be determined.

Question 3

**How is Shubham related to Shivani?**
**(I) Shubham is brother of Meenal. Shivani is niece of Pooja.**
**(II) Neeraj is Meenal's uncle and Preeti's brother**

**Correct Option: D**

**Explanation:**

Either statement cant give the answer.
From both statements we can get the relationship as Pooja is Neeraj's sister but it cannot be clearly said that Shubham & Meenal are Pooja's children or not & Shivani is Neeraj's daughter, because there can be other siblings of Neeraj and Pooja also.

# Logical Sequence Of Words Formulas

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# Logical Sequence Of Words Formulas and definition

The page consists of Logical sequence of words formulas to find out the arrangement which is logically best among all. Through this page you will learn all the important Formula for Logical Sequence Of Words. Under this, a sequence of words or number of words will be given.

**You need to organize these words in a meaningful way or logically correct.**

**Note :**The questions will come majorly in 4 options however to make the questions complex sometimes there may be 8-9 options also. Though these type of problems comes rarely. Because out of nine options it is difficult to find out the logical sequence of the question.

## Logical Sequence Of Words Formula:

### 1. Sequence of occurrence of events/phases of a process:

Under this type, the given number of words indicates the phases of development of a process or a sequence of occurrence that directed to a major outcome. You need to find the order that is from 'starting to completion of the process'.
**For example –** the events that led to rain, the phases of product development, etc.

### 2. Arrangements of Rising or declining value:

In this type of arrangements, there will be different criteria's will be given such as period, time, size, value, area, intensity, price, etc. You need to organize the number of words in an increasing or decreasing command. Problems under this type are easy to solve in a single shot.

### 3. Arrangement as per English dictionary:

In this type of arrangement, you are asked to organize the words as same as order specified in the English dictionary. Solutions can be drawn by making alphabetical arrangement.

### 4. 'Part' to 'whole' arrangement of things

Under this, a number of words will be given related to a specific group or category of items. You are asked to organize them in an order which represents the part to the whole arrangement.
For instance, an arrangement may start with 'egg' being the part and progress to completion with the birth of 'chicken'.

## Types of Logical Sequence of Words :

- Sequence of Occurrence of Events
- Sequence of Objects in a Class or Group
- Sequence in Ascending or Descending Order
- Sequential Order of Words According to Dictionary

## Concept of Logical Sequence of Words :

1. **Pattern Recognition:** The central idea is to recognize a pattern or relationship that connects the words in the sequence. This pattern could be based on meanings, linguistic properties, grammatical rules, or other logical criteria.

2. **Pattern Types:** There are various types of patterns that can be used to create logical sequences of words, including alphabetical order, numerical order, synonyms, antonyms, analogies, cause-and-effect relationships, part-whole relationships, and more.

3. **Predictive Skill:** Once you identify the pattern, you can predict the next word or words in the sequence. This involves applying the same pattern to extend the sequence logically.

4. **Analytical Thinking:** Solving logical sequence of words puzzles requires analytical thinking. You need to critically examine each word and its relationship with the preceding and succeeding words.

5. **Multiple Possibilities:** Depending on the complexity of the puzzle, there might be multiple valid patterns that can be deduced. This adds to the challenge and requires careful consideration.

6. **Contextual Considerations:** Sometimes, the context of the puzzle can provide hints about the type of pattern to look for. This can include the theme of the puzzle, the subject matter, or the instructions given.

7. **Problem-Solving Approach:** To solve such puzzles, you'll need to try different strategies and test hypotheses until you find a pattern that consistently fits the given words.

8. **Practical Applications:** The ability to identify logical sequences of words has practical applications beyond puzzles. It's important for understanding language patterns, deciphering codes, analyzing texts, and even in areas like data analysis.

Questions and Answers for Sequence of Words :

**Question 1 :**

Find the next two terms of the given series.
Y, W, U, S, Q, O, M, ?, ?

1.
    1. **M, C**
    2. **N,C**
    3. **K, I**
    4. **Can't be determined**

**Answer:** K,I

**Explanation :**

The letter series are in Reverse odd number alphabetical order.

Like —- 25 – Y , 23- W, 21-U, 19-S and so on.

**Question 2 :**

Arrange the following words in logical or chronological order.

1. Poverty

2. Population

3. Unemployment

4. Crime

1.

1. **2, 3, 1, 4**
2. **3, 4, 2, 1**
3. **2, 1, 4, 3**
4. **1, 2, 3, 4**

**Answer :** 2, 3, 1, 4

**Explanation :**

Due to high population, unemployment is increased which results in poverty and then these people commit crime.

Thus,

Population > Unemployment > Poverty > Crime

**Question 3 :**

Arrange the following words in logical or chronological order.

1. Iridium

2.Ruthemium

3.Gold

4. Rhodium

1.

1. **4321**
2. **1234**
3. **3214**
4. **4132**

**Answer :** 4321

**Explanation :**

The metals are arranged in decreasing order of their values i.e expensive to cheapest:

Rhodium >Gold >Ruthenium > Iridium

**Question 4 :**

Arrange the given words in the correct order as they would appear in the dictionary :
Ring , Right , Write , Rigid , Risk

1.

1. **Right, Risk, Ring, Rigid , Write**
2. **Rigid, Right, Risk, Ring, Write**
3. **Risk, Ring, Right, Rigid, Write**
4. **Right, Rigid, Ring, Risk, Write**

**Answer :** Right, Rigid, Ring, Risk, Write

**Explanation:**

The correct sequence is

" Right -> Rigid -> Ring -> Risk -> Write "

**Question 5 :**

Arrange the words in the most appropriate sequence:
Stone and Rocks Age
Metal Age

Atomic Age

Alloy age

1.

    1. **3-2-4-1**
    2. **1-2-3-4**
    3. **1-4-2-3**
    4. **4-2-3-1**

**Answer : 1-2-3-4**

**Explanation :**

The correct order of the ages according to the sequence in which they have occurred is Stone and

Rocks Age -> Metal Age -> Atomic Age -> Alloy Age

# How To Solve Logical Sequence Of Words Questions Quickly

## How to solve Logical Sequence of Words

Here on this page you will learn about How to solve logical sequence of words quickly and easily. While solving logical reasoning sequence of words, mainly the candidate has to focus on is arrangement of sentence.

This page will give you an idea on How to solve Logical Sequence of Words quickly.

**Important facts :** Sequence of increasing size, intensity, value, etc. The best way to solve logical sequence of words is by having a look at its question. The more you solve the question the better you will get the result.

## Concepts for How to solve Logical Sequence of words :

- **Pattern Recognition:** The foundation of logical sequences of words is recognizing a consistent pattern that links the words together. This pattern could be based on linguistic properties, numerical sequences, analogies, categories, cause-and-effect relationships, and more.

- **Pattern Types:** Various types of patterns can be used to create logical sequences of words. These include alphabetical order, numerical progression, synonyms, antonyms, sequential actions, part-whole relationships, and more.

- **Predictive Skill:** Once you identify the pattern within the given sequence, you can predict the next word or words based on the established pattern.

- **Analytical Thinking:** Solving logical sequence puzzles requires analytical thinking and careful observation. You need to analyze the relationships between words and deduce the underlying logic.

- **Contextual Clues:** The context of the puzzle can provide valuable clues. Consider the theme, subject matter, or any instructions given, as they might hint at the type of pattern to look for.

- **Real-World Significance:** Beyond puzzles, understanding logical sequences of words has practical applications. It can improve your language comprehension, help you decipher codes or patterns in texts, and enhance your critical thinking skills.

- **Language Play:** Some sequences might involve wordplay, puns, or linguistic twists that add an extra layer of complexity to the challenge.

## Types of Arrangements

### *There is mainly two types of Arrangements which is given below :*

1.
    1. **Arrangement According to Logic**
    2. **Arrangement According to Dictionary**

**Arrangement according to logic :**

As the name implies, in this type of questions, a sequence is formed with a certain number of words given in such a way that it gives a logical step-by-step completion of the process or the activity described.

**Arrangement According to Dictionary**

Arranging words in alphabetical order implies 'to arrange them in the order as they appear in a dictionary'.
For this arrangement, first we shall take the first letter of each word and then arrange the words in the order in which they appear in the English alphabet, then take the second letter and so on.

Questions and Answers on How to solve Logical Sequence of Words:

**Question 1 :**

**Arrange the following words in a meaningful sequence.**

1. Infection
2. Consultation
3. Doctor
4. Treatment
5. Recovery

**A. 1, 3, 4, 5, 2**

**B. 1, 3, 2, 4, 5**

**C. 1, 2, 3, 4, 5**

**D. 2, 3, 5, 1, 4**

*Correct Answer: B*

*Explanation:*

Infection occurs first, then one visits a doctor, and after consultation, the doctor starts the treatment which is followed by recovery.

**Question 2 :**

**Arrange the following words in a meaningful sequence.**

1. Punishment
2. Judge
3. Police
4. Crime
5. Judgment

**A.  2, 3, 1, 5, 4**
**B.  1, 2, 3, 4, 5**
**C.  2, 3, 5, 1, 4**
**D. 4, 3, 2, 5, 1**

*Correct Answer: D*

*Explanation:*

Crime occurs first, then the police arrive, then we go the judge, then judgment is done and after that punishment is given.

**Question 3 :**

**Arrange the words given below in a meaningful sequence**

1. Flower
2. Branch
3. Fruit
4. Trees
5. Leaves

**A. 4, 3, 1, 2, 5**
**B. 4, 2, 5, 1, 3**
**C. 3, 2, 1, 5, 4**
**D .1, 2, 3, 4, 5**

*Correct Answer: B*

*Explanation:*

Trees bear branches, branches contains leaves, and then comes flower which modifies into fruits.

**Question 4 :**

**Arrange the following words in a meaningful sequence.**

1. Butter
2. cow
3. Milk
4. Grass
5. Curd

**A. 1, 2, 3, 4, 5**
**B. 4, 2, 5, 1, 3**
**C. 2, 4, 3, 5, 1**
**D. 2, 3, 5, 1, 4**

*Correct Answer: C*

*Explanation:*

A cow feeds on grass then gives milk. The curd is produced from milk and butter is produced from curd

**Question 5 :**

**Arrange the following words in a meaningful sequence.**

1. Vegetable
2. Dish
3. Market

4. Cutting

5. Cooking

**A. 2, 3, 1, 5, 4**

**B. 3, 1, 4, 5, 2**

**C. 2, 3, 5, 1, 4**

**D. 4, 3, 2, 5, 1**

*Correct Answer: B*

*Explanation:*

We go to the market to buy vegetables then we cut the vegetable before cooking.
After cooking is done, the dish is ready.

# Tips and Tricks and Shortcuts for Logical Sequence of Words

## Shortcuts for Logical Sequence of Words

Here on this page you will get to know about the Tips, Tricks and Shortcuts to solve
Logical sequence of words .

Logical sequence of words mainly delas in arrangements in terms of Alphabets,

arrangement in meaningful order and arrangement according to events.

**What Is Logical Sequence Of Words?** Arrangement of words in a meaningful or logical
sequence is known as the Logical Sequence of Words. It sounds easy but sometimes questions are
very tricky to answer. So, we need to know some of the tricks to solve the questions easily.

## Tips, Tricks and Shortcuts for Logical Sequence of Words

1. Arrangement of events

Candidate needs to arrange the whole series which means from start to its completion.

## 2. Arrangement of value

Candidate needs to arrange the sequence according to it's given increasing or decreasing value.  It includes period, time, etc

## 3. Arrangement as per English dictionary

Candidate needs to arrange words as same as it is arranged in a dictionary.

## 4. 'Part' to 'whole' arrangement of things

Candidate must arrange the sequence in such a way that it shows the basic part of something to the whole.

## 5. Arrangement according to logic :

As the name implies, in this type of questions, a sequence is formed with a certain number of words given in such a way that it gives a logical step-by-step completion of the process or the activity described.

## 6. Arrangement According to Dictionary :

Arranging words in alphabetical order implies 'to arrange them in the order as they appear in a dictionary'.
For this arrangement, first we shall take the first letter of each word and then arrange the words in the order in which they appear in the English alphabet, then take the second letter and so on.

**Note :**The concept of a logical sequence of words is centered around perceiving relationships, identifying patterns, and applying logical thinking to decode the structure of the sequence. This skill is valuable not only for puzzle-solving but also for understanding language intricacies and reasoning in various contexts.

## Concept of Logical Sequence of Words :

1.  **Pattern Recognition:** The central idea is to recognize a pattern or relationship that

    connects the words in the sequence. This pattern could be based on meanings, linguistic

properties, grammatical rules, or other logical criteria.

2. **Pattern Types:** There are various types of patterns that can be used to create logical sequences of words, including alphabetical order, numerical order, synonyms, antonyms, analogies, cause-and-effect relationships, part-whole relationships, and more.

3. **Predictive Skill:** Once you identify the pattern, you can predict the next word or words in the sequence. This involves applying the same pattern to extend the sequence logically.

4. **Analytical Thinking:** Solving logical sequence of words puzzles requires analytical thinking. You need to critically examine each word and its relationship with the preceding and succeeding words.

5. **Multiple Possibilities:** Depending on the complexity of the puzzle, there might be multiple valid patterns that can be deduced. This adds to the challenge and requires careful consideration.

6. **Contextual Considerations:** Sometimes, the context of the puzzle can provide hints about the type of pattern to look for. This can include the theme of the puzzle, the subject matter, or the instructions given.

7. **Problem-Solving Approach:** To solve such puzzles, you'll need to try different strategies and test hypotheses until you find a pattern that consistently fits the given words.

## Shortcuts for Logical Sequence of Words to solve Questions and Answers :

Let's have a look at some few solved questions.

**Question 1 :**

Arrange the given words in a meaningful sequence.

1. Gwalior

2. Universe

3. Madhya Pradesh

4. World

5. India

**A. 1, 2, 3, 4, 5**

**B. 1, 3, 5, 4, 2**

**C. 3, 4, 2, 1, 5**

**D. 4, 1, 5, 3, 2**

### *Correct Answer: 1, 3, 5, 4, 2*

### *Explanation :*

According to the sequence, Gwalior is in Madhya Pradesh and MP is in India then India is in World and world is in Universe.

**Question 2 :**

Arrange the words given below in a meaningful sequence.

1. Community

2. Family

3. Member

4. Locality

5. Country

**A. 3, 2, 1, 4, 5**

**B. 1, 2, 3, 4, 5**

**C. 5, 4, 3, 2, 1**

**D. 4, 3, 2, 1, 5**

*Correct Answer: 3, 2, 1, 4, 5*

*Explanation :*

If we arrange the sequence in correct way the sequence would be like, Member – Family – Community – Locality – Country because Member has less people than Family, Family has lee people than Community, Community has less people than Locality, A locality has less people than Country.

**Question 3 :**

Put the words in the appropriate order in the list below:
1. Site 2. Plan 3. Rent 4. Money 5. Building

**A. 4,1,2,5,3**
**B. 3,4,2,5,1**
**C. 2,3,5,1,4**
**D. 1,2,3,5,4**

*Correct Answer: 4,1,2,5,3*

*Explanation:*

The correct order of owning a building is 4,1,2,5,3. i.e. Money – Site – Plan – Building – Rent

**Question 4 :**

Explain the correct order of these elements based on the sequence in which they are added while making tea:

**A. Water , milk, tea powder , sugar**
**B. Sugar , milk , water , tea powder**
**C. Water , tea powder , sugar , milk**
**D. Tea powder , milk , water , sugar**

*Correct Answer : Water , tea powder , sugar , milk*

*Explanation:*

The correct order in which these elements are added to make tea is : => Water , tea powder , sugar , milk.

**Question 5 :**

If you want to order any product for yourself from online platform, what is the correct sequence of steps:

A. **Add to cart, Select payment method , Select the product , Log in**
B. **Log in, Add to cart, Select the product ,Select payment method**
C. **Select the product , Add to cart , Log in, Select payment method**
D. **Log in, Select the product , Add to cart , Select payment method**

*Correct Answer : Log in, Select the product , Add to cart , Select payment method*

*Explanation:*

If you want to purchase any item online, first log in to the platform. Then select the product you want to purchase and then add it to the cart. Then finally pay for it and order will be placed.

# Formulas For Letter And Symbols Series

Formulas For Letter And Symbols Series:

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Here, on this page Letter and Symbols Series Formulas is given to the questions easily and quickly.

Many Questions are asked from this Topic that's why we need to Understand this Topic in a better way. **Alphabets are arranged from 1 to 26 or also Possibly in reverse direction.**
In Letter Series there are both Consonants and Vowels.

## Letter and Symbol series Formulas & Rules to Follow:

Definition:

Based on the position of English alphabets, questions are framed under this topic. To solve letter and series problems students need to first understand the positions of the alphabets so that they can solve each and every question quickly and in an easy way. There are various types under this reasoning topic. Let's discuss all those to know the topic thoroughly.

### 1. Position of letters in English

### 2. Concept of EJOTY:

The second concept to understand the position of alphabets without any efforts in EJOTY. Anyone can easily find out the position by remembering this rule. But it is advisable that you learn the positions of different letters in the alphabet.

For instance, if we need to check the 14th letter from the left side of the alphabet. We already know that the 15th letter from the left-hand side is O, now we want to find letter before O and that is N. Remembering the positions of letters is a key to quickly crack this kind of questions.

### 3. Position number of letters in reverse form:

### 4. Alpha-Numeric Sequence:

A disorderly arrangement of few letters, numbers, and symbols will be there in these Alpha-numeric sequence questions. However, occasionally English alphabets from A to Z are given simply.

**Points to remember :**
- We know vowels of English alphabets like A, E, I, O and U and leftover are consonants of English
- First half of English letters are called as A to M and second half of letters are called as N to Z.
- Left hand side means Z to A or right to left side of English alphabets.
- Right hand side means A to Z or left to right side of English alphabets.

## Letter Series Question and Answers

**Question 1 :**

In a certain code '365' is written as '698'. How will '264' be written in this code?

A)895
B)598
C)597
D)150

**Explanations**

365 – > 698

After Observing we see Each digit increases by 3

so 264 -> 597

**Question 2 :**

If PREPINSTA is written as KIVKRMHGZ, then what is written as ARSENAL?

A)ZIHVMZO
B)ZIHNJIO
C)ZHIVNZO
D)None of the above

**Explanation:**

As KIVKRMHGZ is reverse alphabetical order of PREPINSTA, similarly ZIHVMZO will be reverse alphabetical of ARSENAL.
Reverse alphabetical will as
A-Z
B-Y
C-X
D-W
And so on.

**Question 3 :**

Find the missing terms
BDFH, JLNP , _ _ _ , ZBDF

A)RIVX
B)XVIR
C)IVRX
D)QSTR

**Explanation:**

In this series, the first letter "B" moves two positions forward to become "D", the second letter "D" moves two positions forward to become "F", and so on.

**Question 4 :**

Find the next term in the given series , A3PQ, C6TU, E9XY, _ _ _

A)G12AB

B)H12ZA

C)H11YZ

D)I10AB

**Explanation:**

In this series, the first letter "A" moves two positions forward to become "C", and numbers are multiple of "3". Then, the next three pairs of letters follow the pattern of moving two positions forward and then two positions forward respectively.

**Question 5 :**

Choose the most appropriate answer from the given options

ABC , CDG, GHO , ?

A)LMY

B)ABE

C)GHK

D)ADE

**Explanation:**

In ABC position of A + position of B = Position of C

In CDG position of C + position of D = Position of G

In GHO position of G + position of H = Position of O

In DEI position of L + position of M = Position of Y

# How To Solve Letter And Symbol Series Quickly

# How To Solve Letter and Symbols Series Questions Quickly

In this Page you will learn How to Solve Letter and Symbols Series Questions Quickly

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Based on the position of English alphabets questions are framed under this topic. To solve letter and series problems students need to first understand the positions of the alphabets so that they can solve each and every question quickly and in an easy way.

There are various types under this reasoning topic. Let's discuss all those to know the topic thoroughly.

## Types of Letter and Symbol Series

| Types | Explanation |
|---|---|
| **Alphabetical Order:** | A straightforward series where letters are arranged in their regular alphabetical order.<br>**Example: A, B, C, D, E, …** |
| **Repeated Patterns:** | A series that repeats a specific pattern of letters at regular intervals.<br>**Example: AB, CD, EF, GH, …** |
| **Skipping Letters:** | A series that skips a certain number of letters between each consecutive pair.<br>**Example: A, C, E, G, …** |
| **Ascending or Descending Order:** | A series where letters are arranged either in increasing or decreasing order based on their positions in the alphabet.<br>**Example (Ascending): A, E, I, M, Q, …** |
| **Vowel and Consonant Alternation:** | A series that alternates between vowels and consonants.<br>**Example: A, B, E, D, I, L, …** |
| **Reversed Patterns:** | A series where patterns of letters are reversed.<br>**Example: BA, DC, FE, HG, …** |
| **Shifting Positions:** | A series where each letter is shifted a certain number of positions from the previous letter.<br>**Example: A, C, F, I, …** |

How to Solve Letter and Symbols Questions Quickly:

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## _Arrangement as per English dictionary :_

Ordering words in English alphabetical order means 'To place the alphabets in the order as they seem in an English dictionary'. For making this type, mainly the letter of every word should be considered first. After this arrangement of word is made in the order in which they comes in the English alphabets.

**Question 1.**

**Arrange the following words as per order in English dictionary?**

1.Reflect, 2. Reference, 3.Rearrange, 4. Renovation

A.  2,3,1,4
B.  1,3,2,4
C.  3,2,1,4
D.  3,1,2,4

**Answer: C**
**Explanation:**

The arrangement will be like, we have: Rearrange, Reference, Reflect, and Renovation.

**Question 2.**

**Which word comes first in the dictionary?**

A.  Cartoon
B.  Carter
C.  Captain
D.  Calcium

**Answer: D**
**Explanation**:

The arrangement will be like, we have: Calcium, Captain, Carter, and Cartoon.

**Question 3.**

**If the given words are arranged according to English dictionary, which word will be in third place?**

A. CROW
B. CRACK
C. CRAWL
D. CRAMMER

**Answer: C**
**Explanation**:

The arrangement will be like, we have: Crack, Crammer, Crawl, and Crow.

### *Alpha-Numeric Sequence :*

A disorderly arrangement of few letters, numbers and symbols will be there in these Alpha-numeric sequence questions. However occasionally English alphabets from A to Z are given simply.

**Common data Question for 4 and 5**
**Study the following arrangement carefully and answer the question given below.**

**B@2$G6ACO%7F#βKL2YTP6W35UFV9**

**Question 4.**

**Three of the following four are alike in a certain way based on their positions in the above arrangement and so form a group. Which is the one that does not belong to that group?**

A. C%6
B. YPL

C. 6C$

D. 7#K

**Answer: D**

**Explanation**:

Except option D, all follows similar pattern in the given series. Hence option D is correct.

**Question 5.**

**If all the special signs in the above arrangement are deleted, which of the following will be the tenth from the right end?**

A. L

B. K

C. T

D. 2

**Answer: C**

**Explanation**:

After deleting all the special signs, the new arrangement will be like: B2G6ACO7FKL2YTP6W35UFV9. Hence option 3(T) is correct.

**Question 6.**

**A$_2$ABC, _____, ABC$_4$, A$_5$BC, AB$_6$C**

A. A$_2$B$_2$C

B. AB$_3$C

C. A$_2$B$_3$C

D. ABC$_7$

**Answer: B**

**Explanation**:

Because the letters are the same, concentrate on the number series, which is a simple 2, 3, 4, 5, 6 series, and follows each letter in order.

### *Letter-Word Problems :*

Under letter-word problems, given from the certain word, questions would be asked as, from the starting of the word how many letters in the word is as far away, as it is from the starting of the English alphabet. Also in this type, a certain word is given and then students need to answer about the number of letters that remain same in their position if they place in alphabetical command. At times, in questions are asked in a given word, if vowel and consonants founds or not?

**Question 7.**

**How many sets of letter are there in the word 'BLANKET' which has as many letters between them in the word as in the alphabet?**

A. One
B. Two
C. Three
D. Four
E. More than four

**Answer: A**

**Explanation:**

| Letters in the word | Letters in the alphabet |
|---|---|
| **L** A **N** | **L** M N |

**Question 8.**

**How many letters are there in the word 'LUCERATIVE' which have as many letters between them in the word as in the alphabet?**

A. 1
B. 2

C. 5

D. 4

E. None of these

**Answer: C**

**Explanation:**

| Letters in the word | Letters in the alphabet |
| --- | --- |
| ERATI | EFGHI |
| ATIVE | ABCDE |
| RAT | RST |
| RATIV | RSTUV |
| **T** I **V** | **T** U **V** |

**Question 9.**

**In "DEPERCUSSION" word, exactly how many letters have the same successive direction comparing to the English alphabetical order?**

A. 4

B. 3

C. 2

D. 1

**Answer: D**

**Explanation:**

| Letters in the word | Letters in the alphabet |
| --- | --- |
| PER | PQR |

### *Rule Detection :*

Under this type of questions, a specific rule will be there to solve the problems.

Students are advised to solve the same by following the rules given in the question.

**Question 10.**

**Total number of letters missed among the adjacent letters in the given series is 2. Which of the subsequent series follows this rule?**

A. FILORUX

B. QSVYZCF

C. ADGHKNQ

D. ZBEHKNQ

**Answer: A**

**Explanation:**

F G H I J K L M N O P Q R S T U V W X
  2   2   2     2   2   2

# Letter And Symbol Series Tips, Tricks And Shortcuts

## Tips and Tricks to solve letter and symbol series problems

On this page you will learn about the tips and tricks for letter series. There are mainly 4 types of questions asked in exams. However, these questions can be framed disorderly which makes questions tough. Practicing all these types can improve the speed of the students.

**Letter Series types :**
- Arrangement as per English dictionary
- Alpha-Numeric Sequence
- Letter-Word Problems
- Rule Detection

## Letter and Symbol Series Tips, Tricks and Shortcuts

The diagram given below is just a shortcut method to remember opposites of all the alphabets using some tricky wirds.

**Points to remember :**
- Position of letter in English alphabets
- Position of letter in reverse order
- Concept of EJOTY
- Alpha-Numeric Series

## Concept of Letter Series Tips and Tricks

- Alphabetical Order: A straightforward series where letters are arranged in their regular alphabetical order.

  **Example: A, B, C, D, E, …**

- Repeated Patterns: A series that repeats a specific pattern of letters at regular intervals.

  **Example: AB, CD, EF, GH, …**

- Skipping Letters: A series that skips a certain number of letters between each consecutive pair.

  **Example: A, C, E, G, …**

- Ascending or Descending Order: A series where letters are arranged either in increasing or decreasing order based on their positions in the alphabet.

  **Example (Ascending): A, E, I, M, Q, …**

- Vowel and Consonant Alternation: A series that alternates between vowels and consonants.

  **Example: A, B, E, D, I, L, …**

- Reversed Patterns: A series where patterns of letters are reversed.

  **Example: BA, DC, FE, HG, …**

- Shifting Positions: A series where each letter is shifted a certain number of positions from the previous letter.

  **Example: A, C, F, I, …**

- Repetition: A series that repeats a specific letter at regular intervals.

  **Example: A, B, A, B, A, …**

## Letter and Symbols Series Tips and Tricks:

1. Arrangement as per English dictionary:

Ordering words in English alphabetical order means 'To place the alphabets in the order as they seem in an English dictionary'. For making this type, mainly the letter of every word should be considered first. After this arrangement of word is made in the order in which they comes in the English alphabets.

**Question 1.**

**The following four words are arranged in an alphabetical order, read carefully and tell which word will come in the second place?**

(a) Absorbing
(b) Absorber
(c) Absorb
(d) Absorbed

Answer: D
Explanation:

The arrangement will be like, we have: Absorb, Absorbed, Absorber, Absorbing.

## 2. Alpha-Numeric Sequence

A disorderly arrangement of few letters, numbers and symbols will be there in these Alpha-numeric sequence questions. However occasionally English alphabets from A to Z are given simply.

**Question 2.**

**Study the following arrangement carefully and answer the question given below.**

**B@2$G6ACO%7FφβKL2YTP6W35UFV9**

How many such vowels are there in the overhead arrangement, each of which is immediately preceded by a number and not immediately followed by a symbol?

(a) two
(b) One

(c) None

(d) Three

Answer: A

Explanation:

According to the question, in the given arrangements two such consonants 6AC and 5 U F are immediately preceded by a number and not immediately followed by a symbol.

## 3. Letter-Word Problems

Under letter-word problems, given from the certain word, questions would be asked as, from the starting of the word how many letters in the word is as far away, as it is from the starting of the English alphabet. Also in this type, a certain word is given and then students need to answer about the number of letters that remain same in their position if they place in alphabetical command. At times, in questions are asked in a given word, if vowel and consonants founds or not?

**Question 3.**

**How many such letters are there in the word QMCKLOA that remain same in its position, if the letters of the word are arranged in alphabetical order?**

(a) None

(b) One

(c) Two

(d) Three

Answer. B

Explanation:

The arrangement will be like:

| Q | M | C | K | L | O | A |
|---|---|---|---|---|---|---|
| A | C | K | L | M | O | Q |

So, such type of letter is only O.

## 4. Rule Detection

Under this type of questions, a specific rule will be there to solve the problems. Students are advised to solve the same by following the rules given in the question.

**Question 4.**

**Find out the correct alternatives in which numbers of letters skipped in between adjacent letters in the series is two?**

(a) LNORU
(b) CFILO
(c) KNQSW
(d) BEHKL

Answer:  B
Explanation:

CFILO

In between C and F 2 letters, In between F and I 2 letters, In between I and L 2 letters, In between L and O 2 letters

**Question 5 :**

**M5AX, _ _ _ _ , O3CV, P4DU, Q5ET**

(a)N2BS
(b)N4BW
(c)R6FQ
(d)None of the above

Explanation:
The first letters begin with M followed by NOPQ.
The third letter begins with A followed by BCDE.

The last letters are in reverse order from X.

The numeric series in order 54345

Therefore N4BW will come in the blank.

Hence Option B is the correct one.