



## GENERAL APTITUDE

Trainer : Sujata Mohite  
[sujata.mohite@sunbeaminfo.com](mailto:sujata.mohite@sunbeaminfo.com)



# REASONING



# Analogy

Q. Pen : Pencil : Ink ::

A. Orange : Banana : Juice

B. Table : Chair : Carpenter

C. Cow : Milk : Curd

D. Fish : Shark : Water

Ans : A



# Analogy

**Q. Planet : Orbit :: Projectile : ?**

A. Track      B. Path      C. Milky Way      D. Trajectory

**Ans D**

**Q. Pigeon : Peace :: White Flag : ?**

A. Friendship      B. Victory      C. Surrender      D. War

**Ans C.** (negotiations)



# Analogy

Q. 25 : 37 :: 49 : ?

A. 41

B. 56

C. 60

D. 65

Ans : D



# Analogy

Q. 5 : 35 :: ?

A. 7 : 77      B. 9 : 45      C. 11 : 55      D. 3 : 24

Ans : A

Q. 9 : 8 :: 16 : ?

A. 27      B. 17      C. 14      D. 18

Ans: A



# Analogy(Assignment)

**Q1. 8 : 256 :: ?**

A. 7 : 343

B. 9 : 243

C. 10 : 500

D. 5 : 75

**Ans C**

**Q2. 8 : 28 :: 27 : ?**

A. 8

B. 28

C. 64

D. 65

**Ans D**

**Q3. 3 : 11 :: 7 : ?**

A. 22

B. 29

C. 18

D. 51

**Ans D**



# Analogy(Assignment)

**Q1. Newspaper : Press :: Cloth : ?**

A. Tailor   B. Textile   C. Factory   D. Mill

**Ans D**

**Q2. Train : Track ::**

A. Idea : Brain                      B. Bullet : Barrel  
C. Water : Boat                      D. Fame : Television

**Ans B**

**Q3. Fear : Threat :: Anger : ?**

A. Compulsion   B. Panic   C. Provocation   D. Force

**Ans C**





# Odd One out

Q. Find the odd one out:

A. 263      B. 111      C. 551      D. 383

Ans : D



# Odd One out

Q. Find the odd one out -

- A. Newspaper-Editor
- B. Film – Director
- C. Car – Driver
- D. Book - Author

Ans : C



# Find the Odd one out

Choose or find odd out

A. Food : Hunger

B. Water : Thirst

C. Air : Suffocation

D. Talent : Education

E. Leg : Lame

**Ans: D**



# Odd One out(Assignment)

Q. Find the odd one out –

A. Sprinkle - Pour

B. Happiness - Merriment

C. Mist – Fog

D. Sad – Unhappy

**Ans : D**



# Odd One out(Assignment)

Q1. A. Curd    B. Butter    C. Oil    D. Cheese

**Ans C**

Q2. A. POCG    B. KLIZ    C. BUDX    D. FMQV

**Ans D**

Q3. A. 751    B. 734    C. 981    D. 862

**Ans A**

Q4. A. 12    B. 25    C. 37    D. 64

**Ans C**

Q5. A. Arrow    B. Axe    C. Dagger    D. Sword    E. Knife

**Ans : A**



# Coding Decoding(A-Z)

Q. In a coded language “SHOWER” is coded as “RHWOES”. What is the code for “FATHER”?

- A. RHAEFT      B. RAHTEF      C. RTHAEF      D. THAREF

**Ans : B**



# Coding Decoding(A-Z)

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Z Y X W V U T S R Q P O N

.....Reverse order of Alphabet

A B C D E F G H I J K L M

N O P Q R S T U V W X Y Z

.....Forward order of Alphabet

Q. DIRECT : WRIVXG :: SOME : \_\_\_\_\_

A. RPQS    B. HNLK    C. HLNK    D. VNOP

**Ans: C**



# Coding Decoding(A-Z)

Q. If EARTH is written as FCUXM in a certain code. How is MOON written in that code?

E	A	R	T	H	M	O	O	N
+1	+2	+3	+4	+5	+1	+2	+3	+4
F	C	U	X	M	N	Q	R	R

Q. If DELHI is written as EDMGJ in a certain code. How is NEPAL written in that code?

A. ODQZM    B. FENHK    C. OFQBM    D. EFMIJ

**Ans: A**





# Coding Decoding(A-Z)(Assignment)

Q. If “PATHOLOGY” is coded as “HTAPOYGOL”, then what is the code for “PROGRAMME”?

- A. GORPREMMA    B. GOREPRMMA  
C. GORREPMMA    D. ROGEPRMMA

• **Ans : A**



# Coding Decoding(Assignment)

**Q1. BANK : CBOL :: GROVE : \_\_\_\_\_**

- A. SPOMP      B. HSPWF      C. EVORG      D. PSWFH

**Ans : B**

**Q2. LARGE : NCTIG :: QUIET : \_\_\_\_\_**

- A. SWKGV      B. GKVWS      C. RPQMN      D. TEIUG

**Ans A**



# Coding Decoding(Assignment)

Q. RATES : ENGRF :: DWELT : \_\_\_\_\_

A. PRSTA    B. RYJYM    C. QJRYG    D. RJMKN

**Ans: C**



# Coding Decoding(Assignment)

**Q. In a certain language, CHENNAI is coded as DGFMZJ. How is MUMBAI coded in the same language ?**

**A. NTNABH      B. LVLCZJ      C. LTLCBH      D. NVNCBJ**

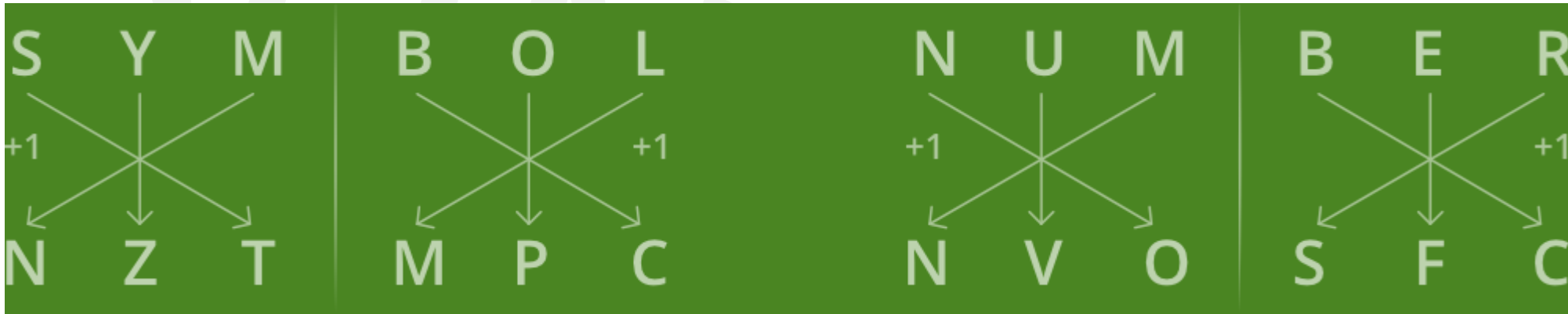
**Ans: A**



# Coding Decoding(Assignment)

- If SYMBOL is written as NZTMPC is a certain code. How is NUMBER written in that code?

**Ans: NVOSFC**



# Coding Decoding(Assignment)

Q1: If in a certain language, MADRAS is coded as NBESBT, how is BOMBAY coded in that code?

- A. CPNCBX    B. CPNCBZ    C. CPOCBZ    D. CQOCBZ    E. None of these

**Ans: B**

Q2: In a certain code, TRIPPLE is written as SQHOOKD. How is DISPOSE written in that code?

- A. CHRONRD    B. DSOESPI    C. ESJTPTF    D. ESOPSID    E. None of these

**Ans: A**

Q3: If in a code language. COULD is written as BNTKC and MARGIN is written as LZQFHM, how will MOULDING be written in that code?

- A. CHMFINTK    B. LNKCHMF    C. LNTKCHMF    D. NITKHCMF    E. None of these

**Ans: C**



# Coding Decoding(Assignment)

Q4: In a certain code, MONKEY is written as XDJMNL. How is TIGER written in that code?

- A. QDFHS      B. SDFHS      C. SHFDQ      D. UJHFS      E. None of these

**Ans: A**

Q5: If FRAGRANCE is written as SBHSBODFG, how can IMPOSING be written?

- A. NQPTJHOJ      B. NQPTJOHI      C. NQTPJOHJ      D. NQPTJOHJ      E. None of these

**Ans: D**



# Coding Decoding(Assignment)

In a certain code, POETRY is written as QONDSQX and OVER is written as PNUDQ. How is MORE written in that code language?

- A. LNNQD
- B. NNNQD
- C. NLNQD
- D. NLPQD
- E. None of these

**Ans: C**

(The first letter of the word is replaced by a set of two letters - one following it and the other preceding it - in the code. The remaining letters of the word are each moved one step backward )





# Series-Numerical

- **Series** : In case of a series there may not be a particular formula but the terms have definite relationship which has to be recognized.

- **Difference or Sum Type Series**

1, 4, 10, 19, 31, ?

Difference between 2 terms increases in multiples of 3

- **Cumulative Series**

1, 3, 4, 7, 11, 18....

Each term is the addition of the previous terms.

- **Power Series**

0, 6, 24, 60, 120, ....

Here each term is defined as  $n^3 - n$

- **Alternate Series**

1, 5, 9, 10, 25, 15, 49,....

Consists of two series of alternate terms having relationship.



# Puzzle Test

Q. If 'paper' is called 'wood', 'wood' is called 'straw', 'straw' is called 'grass', 'grass' is called 'rubber' and 'rubber' is called 'cloth', what is furniture made up of -

A. grass

B. straw

C. wood

D. paper

**Ans: B**



# Coding-Decoding

If 'football' is called 'cricket', 'cricket' is called 'basketball', 'basketball' is called 'badminton', 'badminton' is called 'volleyball', 'volleyball' is called 'hockey' and 'hockey' is called 'golf', which of the following games is not played using a ball ?

- A. Volleyball
- B. Basketball
- C. Hockey
- D. Cricket
- E. None of these

**Ans: A**



# Puzzle Test(Assignment)

- If white is called blue, blue is called red, red is called yellow, yellow is called green, green is called black, black is called violet and violet is called orange, what would be the colour of human blood ?
  - A. Red                      B. Green                      C. Yellow                      D. Voilet                      E. Orange
- **Ans: C**
- If sky is called sea, sea is called water, water is called air and air is called cloud, then what do we drink when thirsty?
  - A. Sky                      B. Air                      C. Water                      D. Sea

**Ans: B**



# Puzzle Test(Assignment)

- If pen is called butter, butter is called soap, soap is called ink, ink is called honey. Which of the following is used for washing clothes?

A. Honey

B. Butter

C. Red

D. Ink

**Ans: D**

- If air is called green, green is called blue, blue is called sky, sky is called yellow, then what is the colour of clear sky?

A. Yellow

B. Pink

C. Sky

D. Water

**Ans: C**



# Puzzle Test(Assignment)

- If train is called bus, bus is called tractor, tractor is called car, car is called scooter. Which is used to plough a field?

A. Train      B. Bus      C. Tractor      D. Car

**Ans: D**

- If room is called bed, bed is called window, window is called flower and flower is called cooler. On what would a man sleep?

A. Window      B. Bed      C. Flower      D. Cooler

**Ans: A**



# Puzzle Test(Assignment)

- If book is called watch, watch is called bag, bag is called bottle and bottle is called window. Which is used to carry the books?

A. Bottle

B. Bag

C. Book

D. Watch

**Ans: A**

- If fork is called glass, glass is called tray, tray is called bucket, then what is used to drink water?

A. Fork

B. Glass

C. Tray

D. Bucket

**Ans: C**



# Linear Arrangement

Five friends are sitting on a bench.

Sunil is sitting next to Sunita & Sanjay is next to Bindu.

Bindu is not sitting with Sumit. Sumit is on the left end of the bench & Sanjay is on the second position from the right.

Sunil is on the right of Sunita & Sunita on the right side of Sumit. Sunil & Sanjay are sitting together.

Based on the above data, answer the following:

1	2	3	4	5
Sumit	Sunita	Sunil	Sanjay	Bindu

**Q1. Who occupies the centre position?**

A. Sumit   B. Sunil   C. Sanjay   D. Bindu

**Ans: B**

**Q2 Sunil is sitting between**

A. Sunita & Bindu   B. Sumit & Bindu   C. Sunita & Sanjay   D. Sanjay & Sumit

**Ans: C**

**Q3. Sumit is sitting on the**

A. second place from right   B. extreme left   C. second place from left  
D. extreme right

**Ans: B**

**Q4. Sunita is sitting how many places away from Bindu?**

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

**Ans: C**





# Linear Arrangement(Assignment)

Q. A, B, C, D, E, F & G are sitting on a wall all facing east. C is immediate to the right of D. B is at an extreme end and has E as his neighbor. G is between E and F. D is sitting third from the south end. Who are D's neighbors?

A. C,E

B. A,C

C. C,F

D. A,F

**Ans: C**



# Circular Seating Arrangement

**Q.** A group of 8 members sit in a circle facing towards the centre. D is between A & F & D is opposite to G. E is to the right of A but E is on the left of C, C whose right hand neighbour is G. B has H to his left & F to his right.

**Who is diagonally opposite to A?**

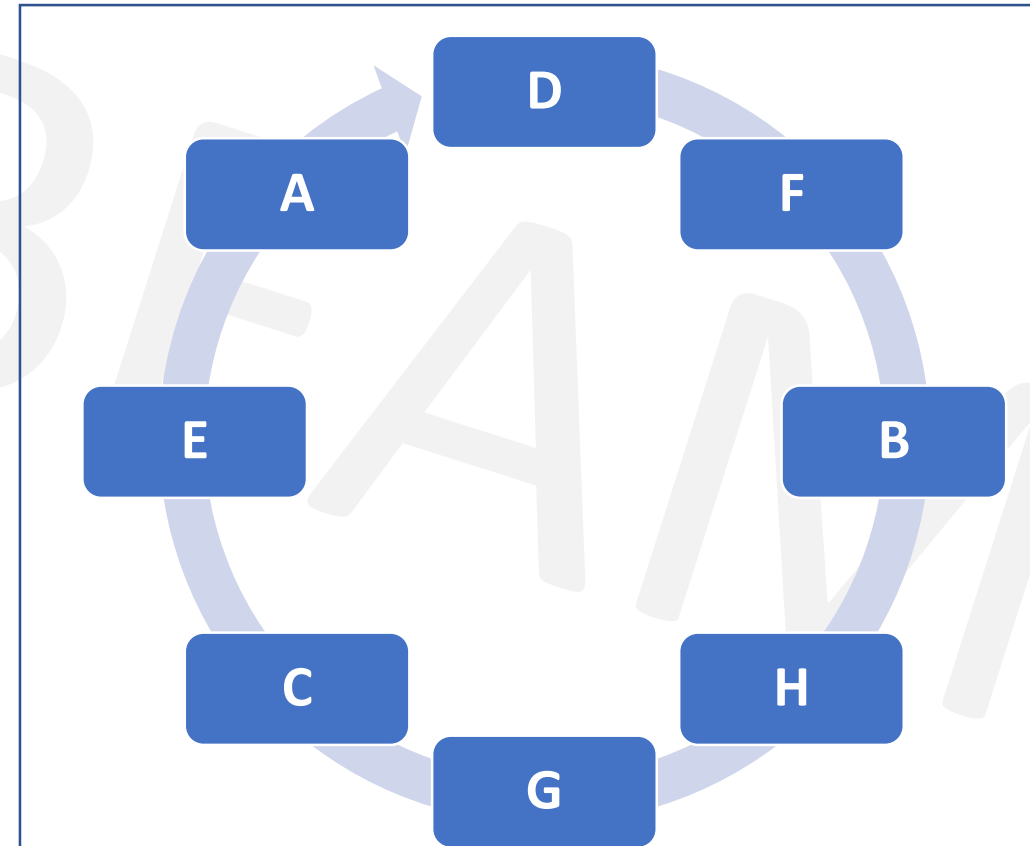
A. B    B. F    C. G    D. H

**Ans: D**

**Who is to the right of D?**

A. B    B. G    C. A    D. H

**Ans: C**



# Circular Seating Arrangement

Q. Eight friends J,K,L,M,N,O,P and Q are sitting around a circular table playing cards. J is second to the right of P who is third to the right of K. M is second to the left of O who sits between P and J. L is not a neighbour of K or N.

1. Who is to the immediate left of K?

- A. N                      B. J                      C. Q                      D. Cannot be determined                      E. None of these

**Ans: C**

2. Which of the following is the correct position of N?

- A. Second to the right of K                      B. To the immediate left of K  
C. To the immediate right of M                      D. To the immediate right of K  
E. None of these

**Ans: D**



# Circular Seating Arrangement(Assignment)

**Q. Six friends are playing a card game on a round table. Subodh is to the right of Prabodh. There is one person between Sudha and Uma. Prabir is between Subodh & Uma & second to the left of Alok.**

**Who is to the right of Sudha?**

A. Prabodh      B. Uma C. Alok D. Prabir

**Ans : A**

**Who is diagonally opposite of Prabir?**

A. Prabodh      B. Uma C. Sudha      D. Prabir

**Ans : C**



# Matrix Arrangement

Q. There are 6 friends A,B,C,D,E & F. Each one is proficient in one of the games, namely, Badminton, Volleyball, Cricket, Hockey, Tennis & Polo. Each owns a different colored car, namely, yellow, green, black, white, blue & red. D plays Polo & owns a yellow car. C does not play either Tennis or Hockey & owns neither Blue nor Yellow car. E owns a White car & plays Badminton. B does not play Tennis, he owns a Red car. A plays Cricket & owns a Black car.

Q1. Who plays Volleyball?

- A. B                      B. C                      C. F                      D. Data Inadequate

**Ans : B**

Q2. What is the color of F's car?

- A. Green                      B. Blue                      C. Red                      D. Either Green or Blue.

**Ans : B**



# Matrix Arrangement(Assignment)

There are 5 people each of whom wear only one of five different brands of shirts.

Five people --- A, B, C, D & E

Five brands --- Parx, Allen Solly, Newport, Arrow & Excalibur

1) A does not wear Allen Solly or Excalibur.

2) D wears Newport or Allen Solly.

3) C wears Parx.

4) B does not wear Arrow, Newport or Excalibur.

Q1. Who wears Excalibur?

A. A

B. E

C. B

D. D

**Ans: B**

Q2 What does D wear?

A. Arrow   B. Allen Solly   C. Newport   D. Excalibur

**Ans: C**



# Coding Decoding

Q. If in a certain language "sing and play" is coded as "ra pa le", "I play football" is coded as "pa se fa" and "she can sing" is coded as "te ra ba" then what is the code for the word "and" in the code language?

- A. le      B. se      C. fa      D. te

**Ans : A**



# Coding-Decoding

In a certain code language, 'col tip mot' means 'singing is appreciable' ; 'mot baj min' means 'dancing is good' and 'tip nop baj' means 'singing and dancing' , which of the following means 'good' in that code language ?

- A. not      B. min      C. baj      D. Can't be determined      E. None of these

**Ans: B**





# Coding Decoding(Assignment)

Q. Study the given information and select the most appropriate term for 'save more money'  
'time and money' is coded as 'tis nim jes'  
'manage money judiciously' is coded as 'lop xer nim'  
'save more time' is coded as 'jes kib dob'  
'save enough judiciously' is coded as 'xer kib hix'.

- A. nim hix kib
- B. jes nim dob
- C. kib nim dob
- D. none of these

**Ans: C**



# Coding Decoding(Assignment)

- In a secret code,
- 762= shoes are old
- 248 = grandpa is old
- 573 = buy good shoes.
- What stands for 'are' in this code?
- A. 2                      B. 4                      C. 6                      D. 8
- **Ans: C**

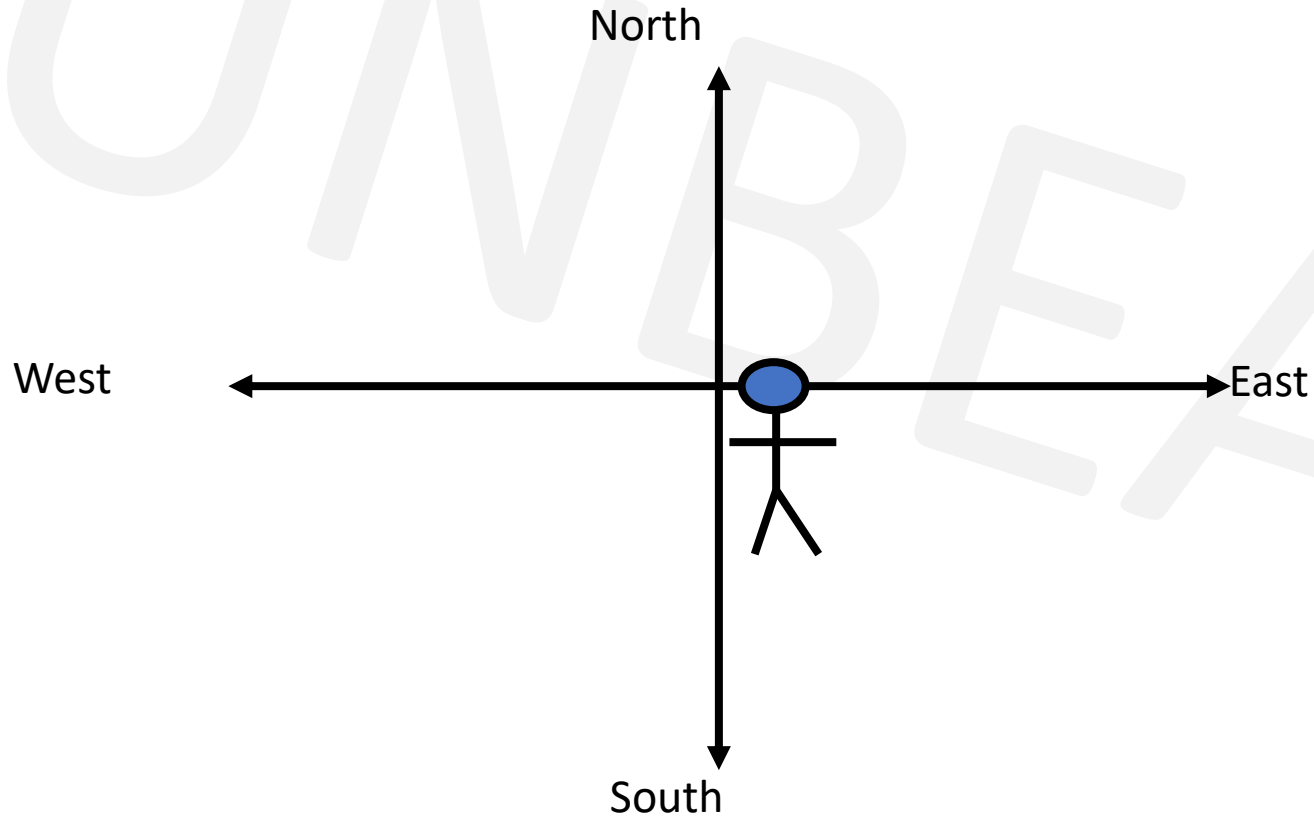


# Directions

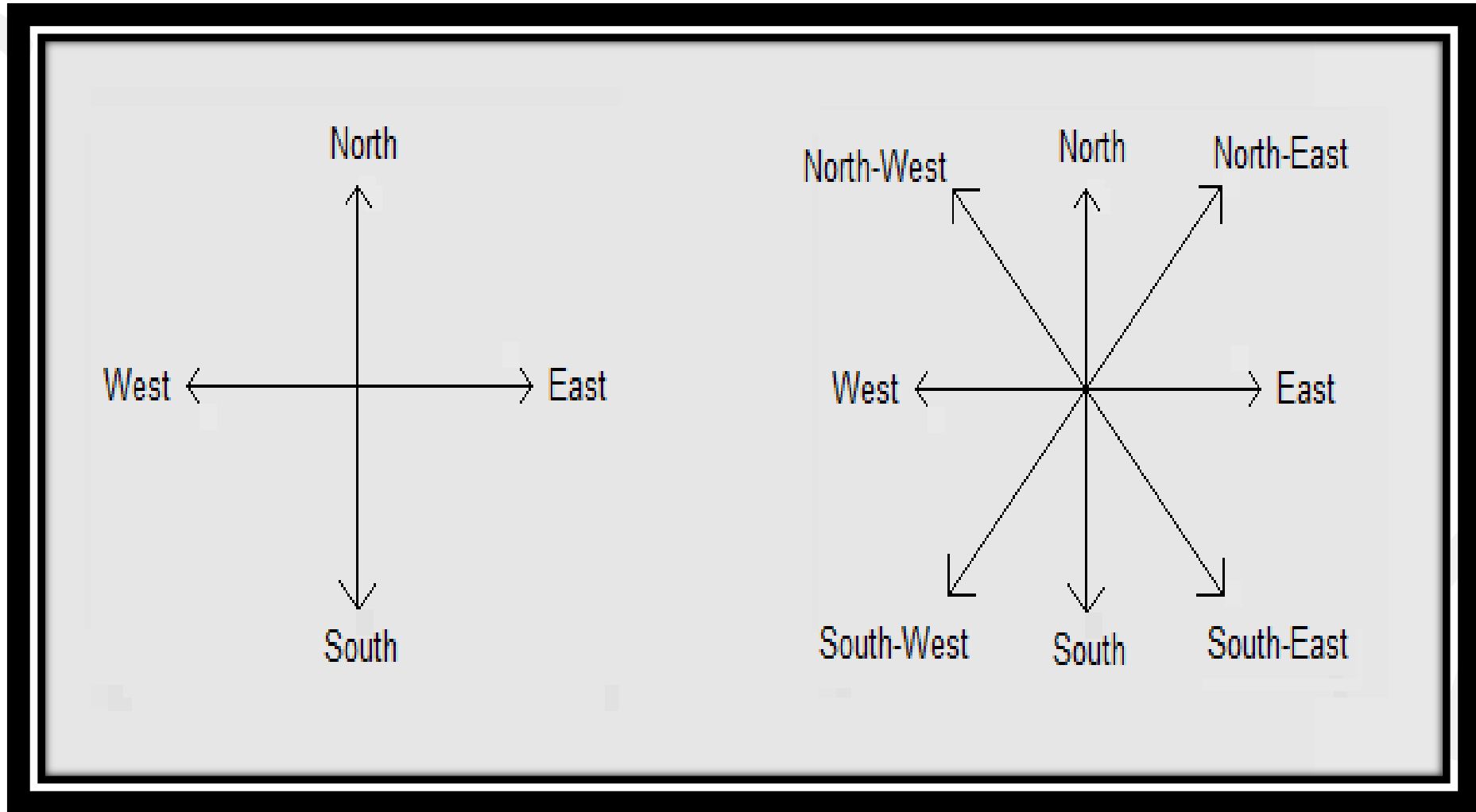
The key to solving these problems is **getting your directions right**.

It is the person's right or left not yours. The key is to think that you are walking as per the directions given in place of the man.

Visualize.



# Directions



# Directions

**Q. A walks 10m in front and 10m to the right. Then every time turning to his left, he walks 5, 15 and 15m respectively. How far is he now from his starting point and facing in which direction?**

- A. 5m south    B. 15m north  
C. 5m north    D. 15m south

**Ans : A**



# Directions

Q. I start walking towards east and after 35 metres turn right and walk another 15 metres and again turn right and walk further 15 metres and stop. What is the minimum distance I have to walk to get to my starting point?

- A. 25 metres      B. 30 metres      C. 35 metres      D. 20 metres

**Ans: A**

“In a right-angled triangle, the square of the hypotenuse side is equal to the sum of squares of the other two sides”, hypotenuse is the longest side, as it is opposite to the angle  $90^\circ$

$$\text{Hypotenuse}^2 = \text{Perpendicular}^2 + \text{Base}^2$$

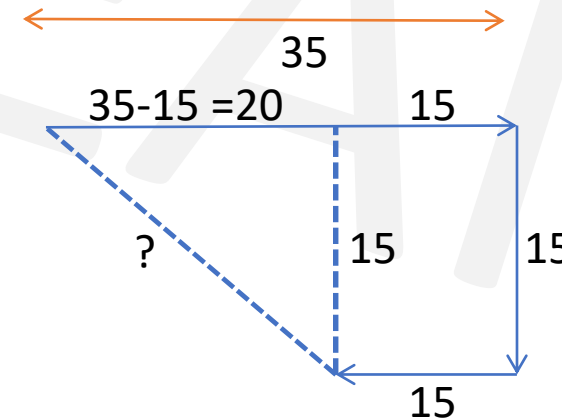
By Pythagoras Theorem –

$$\text{Min dist} = \sqrt{20^2 + 15^2}$$

$$= \sqrt{400 + 225}$$

$$= \sqrt{625}$$

$$= 25$$



# Directions

A and B start walking from a point, in opposite directions. A covers 3km and B covers 4km. Then turns right and walks 4km while B turns left and walks 3km. How far is each from the starting point?

A. 5 kms

B. 4 kms

C. 10kms

D. 8 kms

**Ans: A**

**“In a right-angled triangle, the square of the hypotenuse side is equal to the sum of squares of the other two sides”, hypotenuse is the longest side, as it is opposite to the angle  $90^\circ$**

$$\text{Hypotenuse}^2 = \text{Perpendicular}^2 + \text{Base}^2$$

By Pythagoras Theorem –



# Directions(Assignment)

**Q. Starting from a point x Ramu walked 25 meters towards the west he turned to his left and walked 30 meters he then turned to his left and walked 25 meters he then further turned to his right and walked 12 meters how far is Ramu from the point x and in which direction?**

- A. 42 m south    B. 47 m east    C. 42 m north    D. 27 m south

**Ans : A**





# Directions(Assignment)

**Q. A walks southwards then turns right, then right again and then left and again left. In which direction is he from his starting point if he walked the same distance in before each turn?**

- A. North-west      B. South-east      C. South-west      D. South

**Ans: C**



## Directions(Assignment)

**Q. I am facing East. Turning to the right I go 20 m, then turning to the left I go 20 m and turning to the right I go 20 m, then again turning to the right I go 40 m and then again I go 40 m to the right. In which direction am I from my original position?**

**A. North**

**B. West**

**C. South**

**D. East**

**Ans : B**



# Blood Relation

## List of different types of relations to solve questions based on Blood Relationships.

Relationship	Terms
Father's son or mother's son	Brother
Father's daughter or mother's daughter	Sister
Mother's brother (younger or elder)	Maternal Uncle
Father's brother (younger or elder)	Uncle (Paternal)
Father's sister (younger or elder)	Aunt
Mother's sister (younger or elder)	Aunt
Son's wife	Daughter-in-law
Daughter's husband	Son-in-law
Sister's husband	Brother-in-law
Husband's brother or wife's brother	Brother-in-law
Brother's wife	Sister-in-law
Husband's sister or wife's sister	Sister-in-law
Husband's father or wife's father	Father-in-law
Husband's mother or wife's mother	Mother-in-law
Brother's son or sister's son	Nephew



# Blood Relation

- Q. 'P+Q' means P is the brother of Q  
'PXQ' means P is the father of Q  
'P- Q' means P is the sister of Q

Which of the following represents 'S' is the niece of 'T'?

- A.  $T \times S + M - K$
- B.  $T + M \times S - K$
- C.  $K - S \times M + T$
- D.  $T \times M + S - K$

**Ans : B**



# Blood Relations

Q. Pointing to a boy in the photograph, Monika said, “His sister is the only daughter of my father”. How is the boy related to Monika’s father?

- A. Nephew
- B. Father
- C. Son
- D. Brother
- E. None of these

**Ans: C**



# Blood Relations

Pointing to a photograph ,Nitin said " She is the grandmother of my father's sister's son". How is the woman in the photograph related to Nitin?

A. Mother

B. Aunt

C. Cousin

D. Grandmother

**Ans: D**



# Blood Relations(Assignment)

Q. Introducing a man, a woman said, "He is the only son of my mother's mother." How is the woman related to the man ?

- A. Mother
- B. Aunt
- C. Sister
- D. Niece
- E. None of these

**Ans: D**

(Mother's mother---Maternal grand mother; Maternal grand mother's only son----Maternal uncle.  
So, the man is woman's maternal uncle i.e., the woman is man's niece.)



# Blood Relations(Assignment)

Q. A woman introduces a man as the son of the brother of her mother. How is the man related to the woman?

- A. Nephew
- B. Son
- C. Cousin
- D. Uncle
- E. Grandson

**Ans: C**





# **Blood Relations(Assignment)**

**Q. P and Q are sisters and R and S are brothers. P's daughter is S's sister. How is Q related to R?**

- A. Aunt
- B. Niece
- C. Nephew
- D. Grandmother

**Ans: A**



# Blood Relations(Assignment)

1.  $A + B$  means A is the brother of B
2.  $A \times B$  means A is the father of B
3.  $A \div B$  means A is the mother of B

Which of the following would mean "G is the son of H"?

- A.  $H \times I \times G$
- B.  $H + G \times I$
- C.  $H \div G \div I$
- D.  $H \times G + I$

**Ans: D**



# Blood Relations(Assignment)

Q.  $A + B$  means A is the son of B;

$A - B$  means A is the wife of B;

$A \times B$  means A is the brother of B;

$A \div B$  means A is the mother of B; and

$A = B$  means A is the sister of B.

What does  $P = R \div Q$  mean ?

- a. P is the aunt of Q.
- b. P is the sister of Q.
- c. Q is the niece of P.
- d. Q is the daughter of P.

**Ans: a**



# **Blood Relations(Assignment)**

**Q. Pointing to a girl, Kirti Said, “She is the daughter of my brother’s wife”. How is the girl related to Kirti?**

- A. Nephew
- B. Niece
- C. Sister-in-law
- D. Mother
- E. None of these

**Ans: B**



# Blood Relations(Assignment)

Q. A is the son of C; C and Q are sisters; Z is the mother of Q and P is the son of Z.  
Which of the following statements is true?

- A. P and A are cousins                      B. P is the maternal uncle of A  
C. Q is the maternal grandfather of A      D. C and P are sisters

**Ans: B**

- C and Q are sisters and A is the son of C.
- C is the mother of A and Z is the mother Q.  
Hence, Z is the maternal grandmother of A.
- P is the son of Z.
- Hence, P is the maternal uncle of A.



# Blood Relations(Assignment)

Q. Sherlock said to a lady sitting in a car, "The only daughter of the brother of my wife is the sister-in-law of the brother of your sister." How the husband of the lady is related to Sherlock ?

A. Maternal uncle    B. Uncle    C. Father    D. Son-in-law

**Ans: D**

- Sherlock's son-in-law is the brother of the lady who was sitting in the car.
- Hence, the husband is also the son-in-law of Sherlock .



# Blood Relations(Assignment)

$A \times B$  means 'A is the father of B'.

$A \div B$  means 'A is the daughter of B'.

$A + B$  means 'A is the mother of B'.

$A - B$  means 'A is the brother of B'.

Which of the following means that R is the wife of P?

A.  $P \times R - Q - T$

B.  $P + T + R - Q$

C.  $P + R - Q + T$

D.  $P \times T - Q \div R$

E. None of the above

**Ans: D**



# Data Sufficiency

The last Sunday of March, 2006 fell on which date ?

Statements :

I. The first Sunday of that month fell on 5th.

II. The last day of that month was Friday.

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

**Ans: C**





# Data Sufficiency

Q. How many speeches were delivered in the two days' programme ?

Statements:

- I. 18 speakers were invited to give at least one speech (maximum of two speech), out of which one-sixth of the speakers could not come.
- II. One-third of the speakers gave two speeches each.

- 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

**Ans: E**



# Data Sufficiency(Assignment)

**Q. What day is the fourteenth of a given month?**

**I. The last day of the month is a Wednesday.**

**II. The third Saturday of the month was seventeenth.**

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

**Ans : B**



# Data Sufficiency(Assignment)

**Q. You must submit your application within 10 days from, the date of release of this advertisement." What is the exact date before which the application must be submitted?**

**I. The advertisement was released on 18th February.**

**II. It was a leap year.**

- a. If the data in statement I alone are sufficient.
- b. If the data in statement II alone are sufficient.
- c. If the data either in statement I alone or in statement II alone are sufficient.
- d. If the data given in both the statements I and II together are not sufficient.
- **Answer: a**



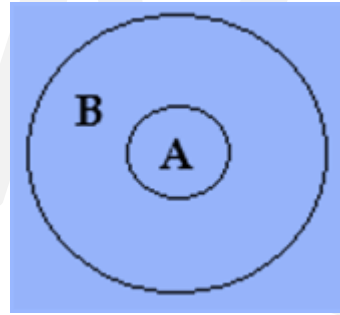
# Syllogisms

- The syllogisms are just argument sentences that require deductive reasoning to arrive at some conclusions.
- **Steps to solve the Syllogism questions:-**
- Read the question thoroughly
- Start drawing the Venn diagram to make the explanation more clear and simplified.
- Follow the sequence of the question while drawing
- Analyse the conclusion from the Venn diagram
- Check for other alternative solutions at the end
- Always pay attention to words like 'some', 'a few', 'all', 'atleast', etc. These words form the base to solve the syllogism questions.
- Never assume anything while solving the syllogism questions. The only data that has to be followed while solving the question is the data mentioned in the question. No extra assumption must be made while solving questions.



# Types of Syllogism

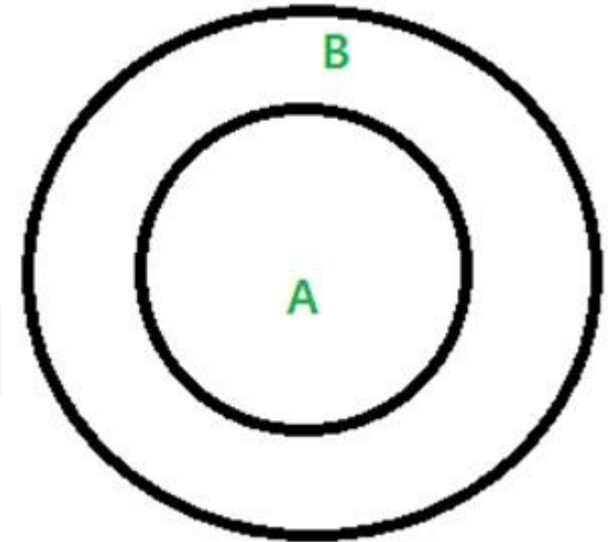
- **1. All A are B**
- A is contained in B but not necessarily vice versa.
- This means A is a subset of B, but B may not be a subset of A.



- It is visible that circle A is inside the circle B, which means that B contains the entire A, i.e. All A are B.

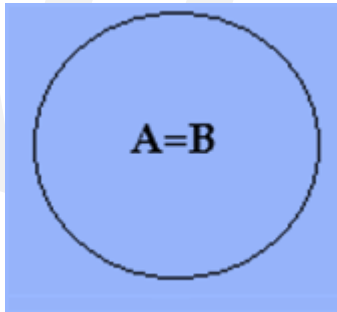
# Example

- 1) All A are B
- Conclusions -
  - Some B are A.
  - Some A are B.
- **Example: All cats are animals.**
- Conclusions -
  - Some animals are cats..
  - Some cats are animals.



# Types of Syllogism

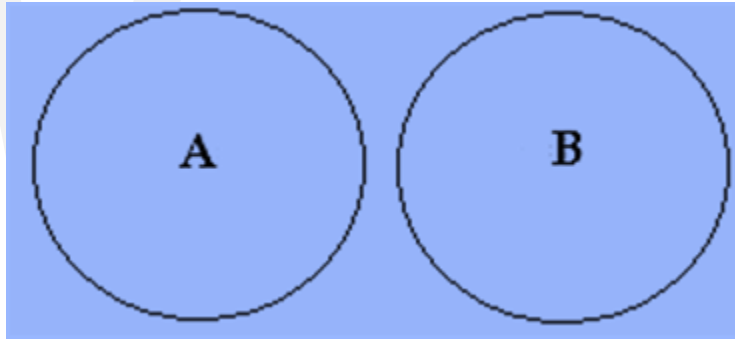
- **2.  $A = B$**
- In this case, the conclusion is similar to the first type, i.e. “All A are B”. Here not only “All A are B”, but also “All B are A”.
- This means A is a subset of B and B is also a subset of A.



- Here A is contained in B and so is B contained in A. So, here A contains all B and again B also contains all A.

# Types of Syllogism

- **3. No A are B**
- B does not contain any of A and so A is not contained in B.
- This means that A and B are disjoint sets.

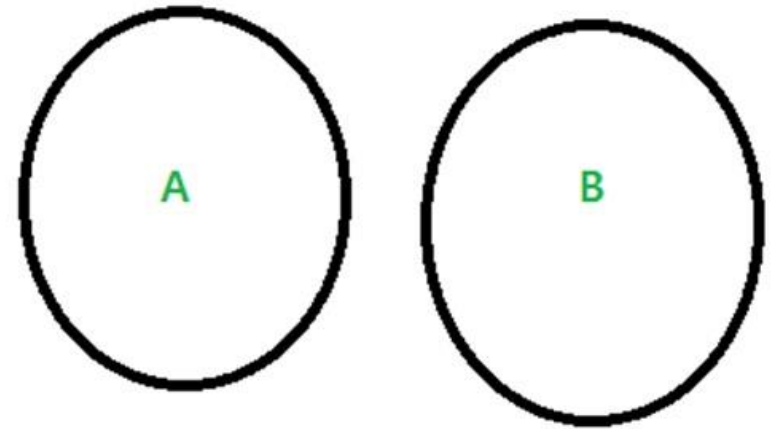


- Here no part of A is present inside of B and similarly, no part of A is present in A. So neither A nor B contain any part of B or A respectively.



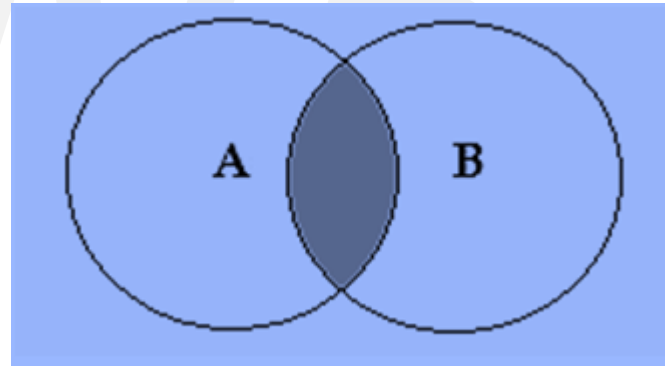
# Examples

- **Example: No cats are animals.**
- Conclusions we get from the above pattern:
- No animals are cats.



# Types of Syllogism

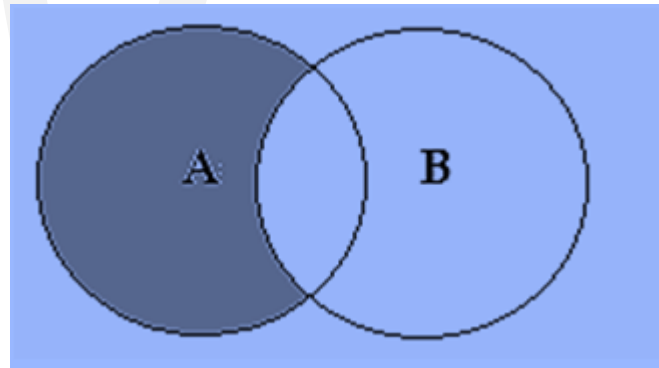
- **4. Some A are B**
- This is the case when some of A is in B that is A and B are intersecting, and thus some B are A will also be true.



- Here, the shaded portion indicates that some portion of A is contained in B while the unshaded portion is uncertain portion and does not indicate anything whether A is contained in B or not.

# Types of Syllogism

- **5. Some A are not B**
- This means that some portion of A is not included in B for sure while the other part of A is uncertain whether it is included in B or not.



- Some portion of A is surely not included in B while there is no surety whether the shaded region is included in B or not.

# Syllogisms

- Some rules that should be followed while solving the syllogism questions:
- Any “All” and “All” sentence will always imply an “All” conclusion.
- Any “All” and “No” sentence will always imply a “No” conclusion.
- Any “All” and “Some” sentence will always imply a “No” conclusion.
- Any “Some” and “All” sentence will always imply a “Some” conclusion.
- Any “Some” and “No” sentence will always imply a “Some not” conclusion.
- Any “Some” and “Some” sentence will always imply a “No” conclusion.



# Syllogisms

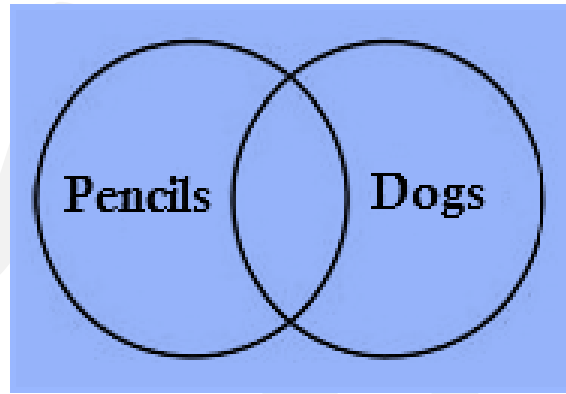
- **Statements:**

- Some pencils are dogs
- All dogs are pens
- All pens are cats

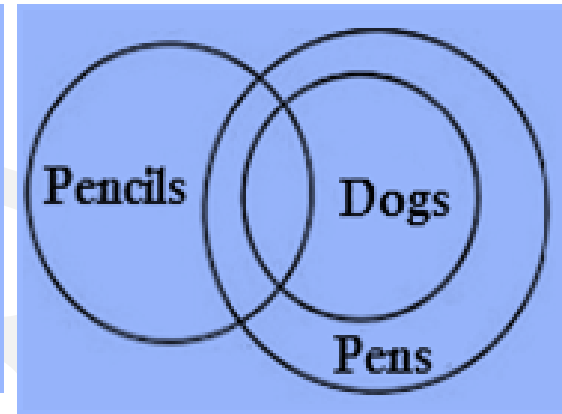
- **Conclusions:**

- All dogs are cats
- Some pens are pencils
- Some pencils are cats

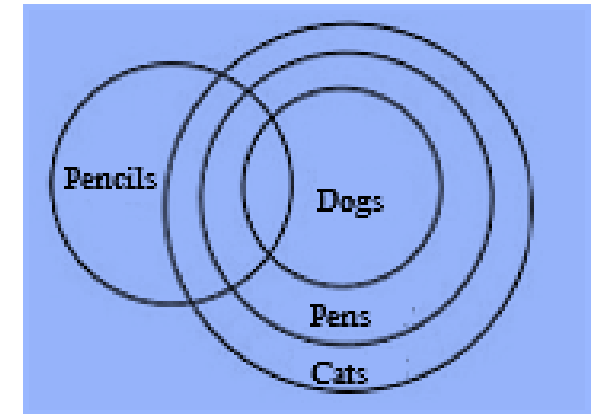
Some pencils are dogs



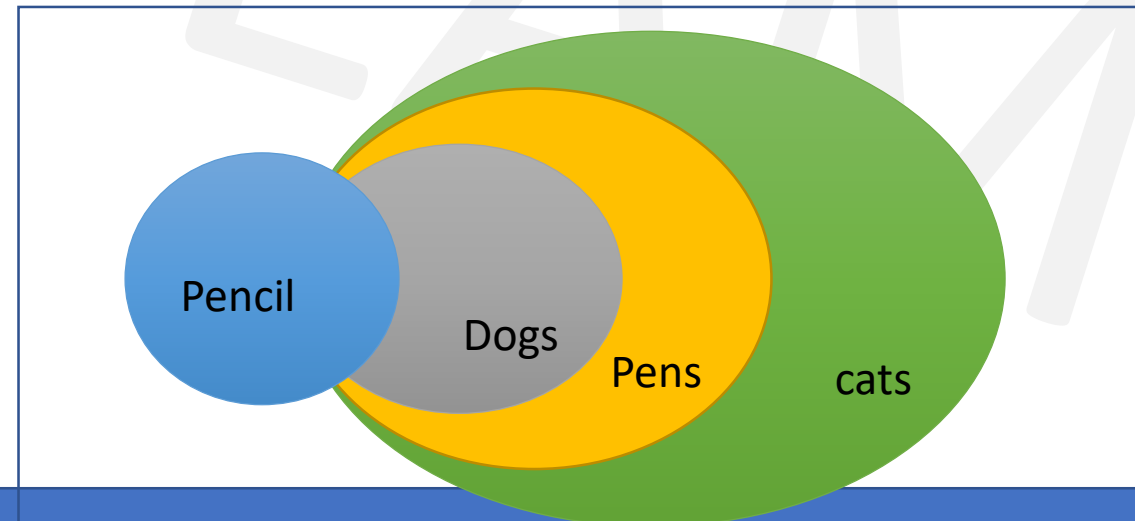
All dogs are pens



All pens are cats

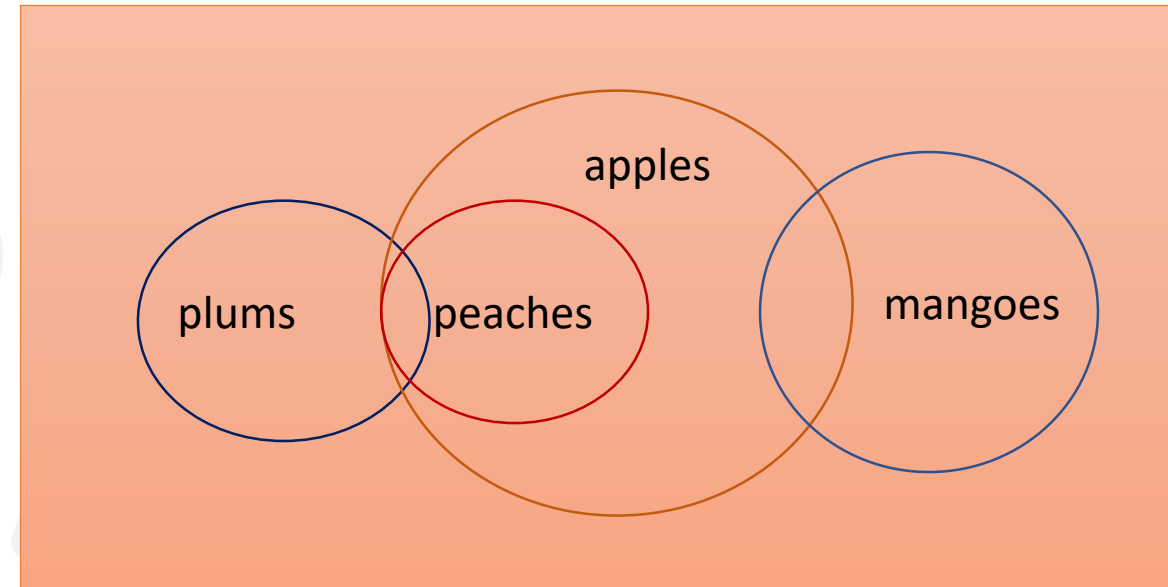


OR



# Syllogisms

- **Statement I:** Some plums are peaches
- **Statement II:** All peaches are apples
- **Statement III:** Some apples are mangoes
- **Conclusion I:** Some mangoes are peaches
- **Conclusion II:** Some apples are peaches
- A. If only conclusion I follow
- B. If only conclusion II follows
- C. If conclusion I and II both follow
- D. If neither conclusion I nor conclusion II follows
- E. If either conclusion I or conclusion II follows
- **Ans: B**



# Syllogisms

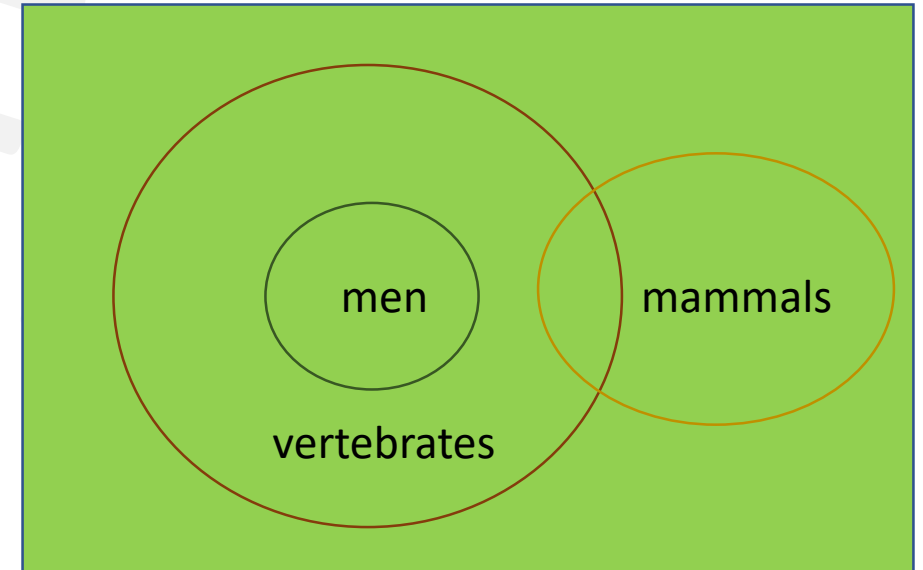
**Q. Statements: All men are vertebrates. Some mammals are vertebrates.**

**Conclusions:**

- 1. All men are mammals.**
- 2. All mammals are men.**
- 3. Some vertebrates are mammals.**
- 4. All vertebrates are men.**

- A. Only (4)  
B. Only (2)  
C. Only (3)  
D. Only (1)  
E. Only (1) and (3)

**Ans: C**



# Syllogisms

- **Statement I: Some spiders are pigeons**
- **Statement II: All pigeons are apples**
- **Conclusion I: All apples are pigeons**
- **Conclusion II: Some spiders are apples**
- A. If only conclusion I follow
- B. If only conclusion II follows
- C. If conclusion I and II both follow
- D. If neither conclusion I nor conclusion II follows
- E. If either conclusion I or conclusion II follows
- **Ans: B**





# Syllogism

Statements:

Some actors are singers.

All the singers are dancers.

Conclusions:

1. Some actors are dancers.

2. No singer is actor.

A. Only (1) conclusion follows

B. Only (2) conclusion follows

C. Either (1) or (2) follows

D. Neither (1) nor (2) follows

E. Both (1) and (2) follow

**Ans: A**



# Miscellaneous

If you write down all the numbers from 1 to 100, then how many times do you write 3 ?

- A. 11      B. 18      C. 20      D. 21

**Ans: C**



# Miscellaneous

Q. How many 7s immediately preceded by 6 but not immediately followed by 4 are there in the following series?

7 4 2 7 6 4 3 6 7 5 3 5 7 8 4 3 7 6 7 2 4 0 6 7 4 3

A. 1

B. 2

C. 4

D. 6

**Ans: B**

**Soln:**

• 7 4 2 7 6 4 3 **6 7 5** 3 5 7 8 4 3 7 **6 7 2** 4 0 6 7 4 3

There are 2 such 7s in the series that are immediately preceded by 6 and not immediately followed by 4.



# Miscellaneous

Q. Arrange the given words in the sequence in which they occur in the dictionary.

1. Terrible      2. Thaw      3. Thank less      4. Testify      5. Terrain

A. 3, 4, 5, 1, 2

B. 2, 1, 5, 4, 3

C. 5, 1, 4, 3, 2

D. 2, 1, 3, 4, 5

**Ans: C**

- The dictionary sequence is:
- **Terrain → Terrible → Testify → Thank less → Thaw.**



# Miscellaneous

Q. Arrange the given words in the sequence in which they occur in the dictionary and then choose the correct sequence.

1. Select      2. Seldom      3. Send      4. Selfish      5. Seller

A. 1,2,4,5,3

B. 2,1,5,4,3

C. 2,1,4,5,3

D. 2,5,4,1,3

**Ans: C**

- The dictionary sequence is:
- Seldom → Select → Selfish → Seller → Send



# Miscellaneous

Q. BOOK coded as 32, FLOWER coded as 128 then KEYBOARD is coded as ?

A. 512

B. 256

C. 1024

D. 64

**Ans: A**

**Soln:**

Output =  $2^{(\text{no. of letters} + 1)}$



# Miscellaneous

In the following list of numerals, how many 2's are followed by 1's but not preceded by 4 ?

4 2 1 2 1 4 2 1 1 2 4 4 4 1 2 2 1 2 1 4 4 2 1 4 2 1 2 1 2 4 1 4 2 1 2  
4 1 4 6

A. Two

B. Three

C. Four

D. Five

**Ans: C**



# Miscellaneous

Q. If \$ means +, # means - , @ means x and \* means  $\div$ , then what is the value of  $16 \$ 4 @ 5 \# 72 * 8 ?$

A. 27

B. 25

C. 29

D. 36

**Ans: A**





# Miscellaneous

Q. How many such digits are there in the number 9346715 each of which is as far away from the beginning of the number as when the digits are rearranged in ascending order within the number?

A. 2 digits

B. 3 digits

C. 4 digits

D. 1 digit

**Ans: A**

- 9346715

- 9 - 0 places away from start

- **3 - 1 away**

- **4 - 2 away**

- 6 - 3 away

- 7 - 4 away

- 1 - 5 away

- 5 - 6 away

- **9346715**

- **1345679**

- There are **two** such digits 3 and 4 in the number 9346715 each of which is as far away from the beginning of the number as when the digits are rearranged in ascending order within the number

9346715 arranged in ascending order

1345679

1 - 0 away places away from start

**3 - 1 away**

**4 - 2 away**

5 - 3 away

6 - 4 away

7 - 5 away

9 - 6 away



# Ranking & Ordering

## Type 1 - Total persons in a queue-

Total number of persons = [Position of person from upward/right + Position of person from downward/left] – 1

Q. Arush ranks seventh from the top and twenty-sixth from the bottom in a class. How many students are there in the class?

- A. 31 students      B. 32 students      C. 33 students      D. 34 students

**Ans: B**

- The whole class consists of:



So, total students = (6 + 1 + 25) = 32 students.

Total students = [Position of person from upward/right + Position of person from downward/left] – 1

$$\begin{aligned}\text{Total students} &= [7 + 26] - 1 \\ &= 33 - 1 \\ &= 32 \text{ students}\end{aligned}$$



# Ranking & Ordering

Q. Arush ranks seventh from the top and twenty-sixth from the bottom in a class. How many students are there in the class?

A. 31 students

B. 32 students

C. 33 students

D. 34 students

**Ans: B**

- The whole class consists of:



**So, total students =  $(6 + 1 + 25) = 32$  students.**

Total students = [Position of person from upward/right + Position of person from downward/left] – 1

$$\begin{aligned}\text{Total students} &= [7 + 26] - 1 \\ &= 33 - 1 \\ &= 32 \text{ students}\end{aligned}$$



# Ranking & Ordering(Assignment)

Q. Rahim ranks 7<sup>th</sup> from the top and 28<sup>th</sup> from bottom in a class. How many students are there in the class ?

- A. 34 students      B. 35 students      C. 36 students      D. 37 students

**Ans: A**

Total number of students =  $[7 + 28] - 1 = 35 - 1 = 34$  students

## Type 1 - Total persons in a queue-

Total number of persons = [Position of person from upward/right + Position of person from downward/left] - 1



# Ranking & Ordering

## Type 2 - Rank of person in a queue-

Position of person from upward = [total number of persons – position of person from down] + 1

Position of person from downward= [total number of persons – position of person from up] + 1

Position of person from right= [total number of persons – position of person from left] + 1

Position of person from left= [total number of persons – position of person from right] + 1



# Ranking & Ordering

Q. Ravi is 7 ranks ahead of Sumit in a class of 39. If Sumit's rank is seventeenth from the last, what is Ravi's rank from the start?

- A. 14th                      B. 15th                      C. 16th                      D. 17th

**Ans: C**

- Sol.
- So, Ravi is 24th from the last.
- |-----| Ravi |-----| Sumit |-----|
- ?                                  6                                  16
- Ravi's rank from start =  $[39 - 17 + 7] + 1 = 15 + 1 = 16^{\text{th}}$
- So, Ravi is 16th from the start.

Position of person from upward = [total number of persons – position of person from down] + 1  
Rank of Ravi from last(bottom) =  $17 + 7 = 24^{\text{th}}$   
Ravi's rank from start =  $[39 - 24] + 1 = 15 + 1 = 16^{\text{th}}$

## Type 2 - Rank of person in a queue-

Position of person from upward = [total number of persons – position of person from down] + 1

Position of person from downward= [total number of persons – position of person from up] + 1

Position of person from right= [total number of persons – position of person from left] + 1

Position of person from left= [total number of persons – position of person from right] + 1



# Ranking & Ordering(Assignment)

Q. In class of 40 students rank of A from end is 20. Find rank of B from start if she is 5 ranks ahead of A?

- A. 14th      B. 15th      C. 16th      D. 17th

**Soln:**



- Rank of B from last =  $20 + 5 = 25^{\text{th}}$
- Position of person from upward = [total number of persons – position of person from down] + 1
- Rank of A from start =  $(40 - 25) + 1 = 15 + 1 = 16^{\text{th}}$
- So, B is 16th from the start.

**Ans : C**



# Ranking & Ordering(Assignment)

Q. Anita ranks twelfth in a class of forty six. What will be her rank from the last?

A. 31th

B. 35<sup>th</sup>

C. 36<sup>th</sup>

D. 37<sup>th</sup>

**Ans: B**

**Rank of Anita from last = [total students – her rank from first ] + 1**

$$= (46 - 12) + 1$$

$$= 35^{\text{th}}$$





# Ranking & Ordering

- Type 3 – when two persons change their rank in a queue
- If two persons are on a definite position from up and down(or left and right) and they interchange their ranks, then Total no. of persons in order = [ present position of first person + previous position of second person ] - 1



# Ranking & Ordering

In a row of girls , Sheena is eighth from the left and Heena is seventeenth from the right. If they interchange their positions, Sheena becomes fourteenth from the left. How many girls are there in the row?

- A. 34      B. 35      C. 30      D. 37

**Ans: C**

$$\begin{aligned}\text{Total number of girls} &= [\text{present position of Sheena} + \text{previous position of Heena}] - 1 \\ &= [14 + 17] - 1 \\ &= 30\end{aligned}$$

## Type 3 – when two persons change their rank in a queue

If two persons are on a definite position from up and down(or left and right) and they interchange their ranks, then

$$\text{Total no. of persons in order} = [\text{present position of first person} + \text{previous position of second person}] - 1$$



# Ranking & Ordering

- Type 4 – when two persons change their rank in a queue
- Previous position of first person = Difference of two positions of second person + previous position of second person
- **OR**
- present position of second person = Difference of two positions of first person + previous position of second person



# Ranking & Ordering

Q. In a row of children, Dipa is fifth from the left and Vinay is sixth from the right. When they interchange their places among themselves, Dipa becomes thirteenth from the left. Then, what will be Vinay's position from right?

- A. 4<sup>th</sup>                      B. 14<sup>th</sup>                      C. 8<sup>th</sup>                      D. 12<sup>th</sup>

**Ans: B**

$$\begin{aligned}\text{Present position of Vinay} &= \text{Difference of two positions of Dipa} + \text{previous position of Vinay} \\ &= (13 - 5) + 6 \\ &= 14^{\text{th}}\end{aligned}$$

## Type 4 – when two persons change their rank in a queue

Previous position of first person = Difference of two positions of second person + previous position of second person

**OR**

present position of second person = Difference of two positions of first person + previous position of second person



# Ranking & Ordering

Q. Tanuj is on the 9th position from upwards and on 38th position from downwards in a class. How many students are in the class?

- A. 47                      B. 45                      C. 46                      D. 48

**Ans: C**

## Type 1 - Total persons in a queue-

Total number of persons = [Position of person from upward/right + Position of person from downward/left] – 1



