

NATIONAL TALENT SEARCH EXAMINATION (NTSE-2020) STAGE -1 STATE : GUJARAT PAPER : MAT

Date: 03/11/2019

Max. Marks: 100

_

SOLUTIONS

Time allowed: 120 mins

In each of the following question, numbers have been organized in a definite number series wherein one number is missing and a question mark (?) is given in its place. Find out the number by choosing the correct option. (Q.No. 1 to 10) 1.4.12.40.2

1.	1, 4, 13, 40, ?			
	(A) 94	(B) 120	(C) 111	(D) 121
Ans.	(D)			
Sol.	Here pattern follows: $+3$,	+9, +27, +81,		
2 .	1, 10, 19, 28, ?, 46			
	(A) 33	(B) 37	(C) 34	(D) 38
Ans.	(B)			
Sol.	Here, pattern follows: +9,	+9, +9,		
3 .	12, 144, 1728, ?			
	(A) 20, 736	(B) 20, 216	(C) 20, 466	(D) 20, 376
Ans.	(A)			
Sol.	Here, pattern follows: \times 1	$12, \times 12, \times 12, \dots$		
4.	786, 514, 378, 310, 276,	?		
	(A) 249	(B) 260	(C) 259	(D) 250
Ans.	(C)			
Sol.	786 – 272 = 514			
	514 - 136 = 378			
	378 - 68 = 310			
	310 - 34 = 276			
-	2/6 - 17 = 259			
5.	2, 13, 67, 271, ?, 1639	(D) 1177	(0) 017	(D) 1071
A	(A) 1067	(B) 11/7	(C) 817	(D) 1371
Ans.	(C) Detterm fellows			
301.				
	2×0 1 13 12×5 2 67			
	$13 \times 3 \ 2 \ 07$			
	07X4 3 Z/I			
	2/1×3 4 81/			
6	817×2 5 1639			
υ.	$(\Delta) 261$	(B) 1/0	(C) 189	(D) 100
Ans	(D)			
Sol	Pattern follows			
500				

	$3 \times 2 \ 2 \ 8$					
	8×2 4 20					
	20×2 6 46					
	46×2 8 100					
7.	12, 6, 14, 12, 16, 18, 18,	?, ?				
	(A) 22, 20	(B) 24, 20	(C) 20, 22	(D) 20, 24		
Ans.	(B)					
Sol.	Pattern follows					
	Odd placed terms are incre	eased by 2				
	Even placed terms are incr	reased by 6				
8.	1728, 2744, 4096, 5832,	?. 10648				
	(A) 9261	(B) 8000	(C) 6859	(D) 6400		
Ans.	(B)	(_ /	(-)	(_)		
Sol.	Terms are cubes of even n	umbers starting from 12				
	$12^3 14^3 16^3 18^3 20^3 22^3$					
9.	79. 84. 81. 82. 83. ?. ?					
2.	(A) 80, 85	(B) 84, 85	(C) 85, 84	(D) 85, 80		
Ans.	(A)	(_ /,	(-,,	(_ / , ,		
Sol.	Odd placed terms are incre	eased by 2				
	Even placed terms are dec	reased by 2				
10.	88. 64. 24. ?					
	(A) 10	(B) 12	(C) 8	(D) 14		
Ans.	(C)	(=)		(=) = =		
Sol.	Multiplication of digits give	es next term				
	8×8 64					
	6×4 24					
	2×4 8					
	Instruction : In each of the following question, English alphabets and / or numbers have been organized					
	in a definite number series wherein an alphabet or a group of alphabets is missing and a question mark					
	(?) is given in its place.	Find out the missing ter	m by choosing the corre	ct option (Q.No. 11 to 20)		
11.	A, F, K, P, U, Z, E, J, O, ?					
	(A) R	(B) S	(C) T	(D) Q		
Ans.	(C)					
Sol.	Position of letter is increase	ed by 5				
12 .	AB, DE, GH, JK, ?					
	(A) LM	(B) NO	(C) MN	(D) PQ		
Ans.	(C)					
Sol.	First letter of each term is increased by 3					
	Second letter of each term is increased by 3					
13.	AA, fff, KK, ppp, U, ?					
	(A) UU	(B) U	(C) V	(D) vv		
Ans.	(B)					
Sol.	The letters in each term is increased by 5. Also, number of letters follows the pattern in a group of 2 and 3.					
14.	PDZ. ?. RBX. SAW					
	(A) QCY	(B) OCY	(C) QCV	(D) QYD		
Ans.	(A)					

Sol.	Pattern follows:				
	$P \xrightarrow{1} Q \xrightarrow{1} R \xrightarrow{1} S$				
	$D \xrightarrow{-1} \overline{C} \xrightarrow{-1} B \xrightarrow{-1} A$				
	$Z \xrightarrow{-1} \overline{Y} \xrightarrow{-1} X \xrightarrow{-1}$	\rightarrow W			
15.	D, H, Y, E, Y, Y, E, Y, H,	?			
	(A) J	(B) I	(C) E	(D) D	
Ans.	(D)				
Sol.	D, H, Y, E, Y is written is r	everse order Y, E, Y, H, D]		
	Answer is D				
16.	A, D, I, P, Y, J, ?				
	(A) Q	(B) T	(C) W	(D) R	
Ans.	(C)				
501.	Pattern Iollows				
	$A \xrightarrow{3} D \xrightarrow{5} I \xrightarrow{7}$	$P \xrightarrow{g} Y \xrightarrow{11} J \xrightarrow{13}$	$\rightarrow W$		
17.	$\underline{B}, \underline{E}, \underline{I}, \underline{N}, 2$				
	2′5′9′14′				
	(A) $\frac{S}{IR}$	(B) $\frac{R}{R}$	(C) $\frac{I}{T}$	(D) $\frac{U}{D}$	
	() 19	18	20	21	
Ans.	(C)	0 1 5			
Sol.	Numerator is increased by	$+3, +4, +5, \dots$			
	T	Jy +3, +4, +3,			
	So, answer must be $\frac{1}{20}$				
	Remark : But observing o	nly denominator, most appi	copriate answer is option (C)	
18.	AB, I, BC, 6, DC, 12, DE	,?			
•	(A) 16	(B) 14	(C) 18	(D) 20	
Ans.	(D) Bomarile : 2 nd torm is not a	ionmont			
301.	By observing last 4 terms of	of series			
	$B \times C = 2 \times 3$ 6				
	$C \times D = 3 \times 4$ 12				
	$D \times E = 4 \times 5$ 20				
19.	O, T, T, F, F, S, S, E, N, ?				
	(A) O	(B) T	(C) F	(D) S	
Ans.	(B)				
Sol.	These are first letter of nun	nbers			
	O ne, T wo, T hree, F our, F i	ve, S ix, S even, E ight, N ine	, T en		
20 .	J, F, M, A, M, J, J, ?	<i>▼</i>			
•	(A) J	(B) F	(C) M	(D) A	
Ans.	(D) These are the first latters a	fmonths			
301.	i nese are the first letters o				
	January, February, March, April, May, June, July, August				

21. How many line segments are there in the given figure ?



Sol. The figure may be labelled as shown. The Horizontal lines are DF and BC i.e. 2 in number. The Vertical lines are DG, AH and FI i.e. 3 in number. The Slanting lines are AB, AC, BF and DC Le. 4 in number. Thus, there are 2 + 3 + 4 = 9 straight lines in the figure.



23. How many triangles are there in the given figure ?

\triangleright	\leq
	(C) 15

(D) 16



Sol. We may label the figure as shown. The simplest triangles are AFB, FEB, EBC, DEC, DFE and AFD Le. 6 in number. The triangles composed of two components each are

> AEB, FBC, DFC, ADE, DBE and ABD i.e. 6 in number. The triangles composed of three components each are ADC and ABC i.e. 2 in number.

(B) 13



There is only one triangle i.e. DBC which is composed of four components.

Thus, there are 6 + 6 + 2 + 1 = 15 triangles in the figure.

24. How many triangles are there in the given figure ?



(A) 4 **Ans. (C)**

(A) 18

Sol. The squares composed of two components each are BKOJ, KDFO, OFGH and JOHI i.e. 4 in number.

There is only one square i.e. CDOB composed of four components. There is only one square i.e. BDGI composed of eight components. Thus, there are 4 + 1 + 1 = 6 squares in the given figure.

(B) 14

(B) 5



(C) 6

26. How many squares are there in the given figure ?



(D) 22

(D) 7

Ans. (A)

Sol. The figure may be labelled as shown.

The squares composed of two components each are

BJMI, CKMJ, DLMK and AIML i.e. 4 in number.

The squares composed of three components each are EBMA, BFCM, MCGD and AMDH i.e. 4 in number.

The squares composed of four components each are VWBA, XYCB, ZA_1DC and B_1C_1AD i.e. 4 in number. The squares composed of seven components each are NOJL, PQKI, RSU and TUIK i.e. 4 in number.

There is only one square i.e. ABCD composed of eight components.

There is only one square i.e. EFGH composed of twelve components. ;

Total number of squares in the figure =4 + 4 + 4 + 4 + 1 + 1 = 18.



27. How many rectangles are there in the given figure ?

Ans. (D)

Sol. The simplest rectangles are CVSR, VETS, RSWM and STKW i.e. 4 in number.

The rectangles composed of two components each are CETR, VEKW, RTKM and CVWM i.e. 4 in number. The rectangles composed of three components each are ACRP, PRMO, EGHT and THIK i.e. 4 in number. Tht rectangles composed of four components each are CEKM, AVSP, TSWO, VGHS and SHIW i.e. 5 in number. The rectangles composed of five components each are AETP, PTKO, CGHR and RHIM i.e. 4 in number. The rectangles composed of six components each are ACMO and EGIK i.e. 2 in number.

The rectangles composed of six components each are AGHP, PHIO, AVWO and VGIW i.e. 4 in number.

The rectangles composed of ten components each are AEKO and CGIM i.e. .2 in number.

AGIO is the only rectangle having sixteen components.

 \therefore Total number of rectangles in the given figure

= 4 + 4 + 4 + 5 + 4 + 2 + 4 + 2 + 1 = 30.

Instruction : (Question No. 28 to 30) Answer the questions on the basis of given figure.

29. How many triangles are there in the given figure ? (A) 40 (B) 36

(D) 42

(D) 7

- Ans. (A)
- **Sol.** The simplest triangles are BGM, GHM, HAM, ABM, GIN, IJN, JHN, HGN, IKO, KLO, LJO, JIO, KDP, DEP, ELP, LKP, BCD and AFE i.e. 18 in number.

The triangles composed of two components each are ABG, BGH, GHA, HAB, HGI, GIJ, IJH, JHG, JIK, IKL, KLJ, LJI, LKD, KDE, DEL and ELK i.e. 16 in number.

(C) 38

The triangles composed of four components each are BHI, GJK, ILD, AGJ, HIL and JKE i.e. 6 in number.

 \therefore Total number of triangles in the figure = 18 + 16 + 6 = 40;

(C) 8

- **30.** How many squares are there in the given figure ? (A) 5 (B) 9
- Ans. (D)

Sol. The squares composed of two components each are MGNH, NIOJ and OKPL i.e.3 in number. The squares composed of four components each are BGHA, GIJH, IKLJ and KDEL i.e. 4 in number.

:. Total number of squares in the figure = 3 + 4 = 7.

Instruction : (Question No.31 to 40) Four figures are given in question no. 31 to 40. One of the figures differ from the rest. Find out the figure which is different from the rest of the figures.

Ans. (D)

Sol. Except, (D) in all other figures the arrow on the circle moves in clockwise direction.

Ans. (D)

Sol. Except, (D) all others are used to write something.

Ans. (A)

Sol. Except, (A) all others are used to cut things.

Ans. (D)

Sol. Except, (D) all others are the source of light.

Ans. (C)

Sol. Except, (C) all others are indoor games.

Ans. (B)

Sol. Except, (B) all others are polygons.

Ans. (D)

Sol. Except, (D) all others are amphibians.

Ans. (A, C)

Sol. Both A,C are possible as (i) Except, (A) all nodes are emerging from one of the side of that figure, And (ii) except (C) number of nodes are equal to number of lines in that figure.

Ans. (B)

Sol. Except, (B) all other figures has a set of parallel lines.

Ans. (C)

 $\textbf{Sol.} \quad \text{Except, (C) in all other figures the dark portion is on the larger side.}$

Instruction : Find out the correct mirror image of the image shown in question no. 41 to 45.

Ans. (C)

Sol. By observation.

Ans. (A)

Sol. By observation.

Ans. (A)

Sol. By observation.

Ans. (B)

Sol. By observation.

- Ans. (C)
- **Sol.** By observation.

Instruction : Find out the correct correlation and answer the question no. 46 to 47.

Instru	uction : Answer question	on no. 51 to 60 as shown	in example and find out t	he correct code from the given	
optio	n by converting the giu	en words in a symbolic l	anguage.		
51.	If $FACE = GBDF$ then I	BADE = ?			
	(A) CBEF	(B) CEBF	(C) CFBE	(D) CBFE	
Ans.	(A)				
Sol.	The word is coded by m	oving each of the letter one s	step forward.		
	So, B is coded as C; A is	s coded as B ; D is coded as	s E; E is coded as F.		
52 .	If $RESULT = 798206$ th	nen LET = ?			
	(A) 096	(B) 680	(C) 092	(D) 086	
Ans.	(A)				
Sol.	By direct coding, the co	de for L is 0, E is 9 and T is	s 6.		
53.	If $ACE = ZXV$ then $? =$	YZW			
	(A) BAD	(B) ABD	(C) EAC	(D) SAD	
Ans.	(A)				
Sol.	By using reverse place v	alue A is opposite to Z,C is o	opposite to X and E is oppos	site to V. Similarly,B is opposite to	
	Y,A is opposite to Z and	D is opposite to W.			
54.	If LITTLE = MHUSMD	then $? = NTUD$			
	(A) MUTE	(B) MOVE	(C) MITE	(D) MATE	
Ans.	(A)				
Sol.	The first letter is coded by	by moving the letter one ste	p forward and then the sec	ond letter is coded by moving the	
	second letter one step ba	ackward and so on. Then. M	IUTE will be the code for NT	TUD.	
55.	If COUNTRY = EMWLY	VPA then ELECTORATE =	?		
	(A) CJCEVOPYWC	(B) GJOEROTYVG	(C) CNCEROPCRG	(D) GJGAMTYVC	
Ans.	(D)	(2) 00 221121110		(2) 0001211110	
Sol.	Here the code follows th	e pattern $+2.2 + 2.2$			
	Therefore the code for H	FI ECTORATE is GIGAVM	TYVC.		
56	If $PORTUGESE = ESE$	GUTROP then MAI AYAI A	M = ?		
00.		(R) MAI AVAI AM	(C) MAI AVAI M		
Ane	(A R)				
Sol	Here we get the code by	reversing the given word So	the code for MALAVALAM	is MAI AVAI AM option (A) $\&$ (B)	
501.	There we get the code by	leversing the given word. 50			
57	If MUSK $= 146816$ then	7 FRO = 2			
57.	$(\Lambda) 112811$	(R) 122012	(C) 15015	(D) 2651815	
1	(A) 113011 (D)	(D) 122912	(C) 15915	(D) 2031813	
лііз. Sal	(D) Here the code is written l	au uniting the reverse place t	ralue of each latter together	So the code for ZEDO is 199019	
501.	If MOTHEDI AND - 05	01622748 then DPEAM -	on each leiter iogenlei.	50, the code for ZERO is 122912.	
30.	II MOTHERLAIND = 93	(D) 96907	: (C) 99760	(D) 89670	
A	(A) 82097	(B) 80297	(C) 82709	(D) 82079	
Ans.	(D) Dec diment and importing the set		Δ:-71M:-0		
501.	By direct coding, the code for D is 8, K is 2, E is 6, A is 7 and M is 9.				
JY.	It SCIENTIST = ICSTNETSI then AMBULANCE = ?				
•	(A) MBUALINCEA	(B) BMAALUECN	(C) MAUBALCNE	(D) UBMLAECNA	
Ans.	(B)		1.1 1		
Sol.	I he word is divided into	group of three letters each a	nd the letters in each group	are reversed.	
60.	It $BOMBAY = GLRYFV$	/ then MADRAS = ?			
	(A) KXIOFP	(B) RIXOIP	(C) KXIOXP	(D) KXIOGQ	
Ans.	(A)				

Sol.	Here the code follows the	e pattern +5,-3,+5,-3,				
	Therefore, the code for MADRAS is RXIOFP. Instruction : Four options are given in question no. 61 to 70. One of the options is different from					
61.	(A) Sodium	(B) Potassium	(C) Gallium	(D) Calcium S	Sulfate	
Ans.	(D)			. ,		
Sol.	Here, (D) is only compou	nd. Other three are metals.				
62 .	(A) 1331	(B) 1728	(C) 4096	(D) 5832		
Ans.	(A)			. ,		
Sol.	Except, (A) all others are	cube of even number.				
63 .	(A) Tabla	(B) Drum	(C) Pakhavaj	(D) Santoor		
Ans.	(D)			. ,		
Sol.	Except, (D) all others are	not string instruments.				
64 .	(A) Mars	(B) Mercury	(C) Jupiter	(D) Pluto		
Ans.	(D)			. ,		
Sol.	Except, (D) all others are	planets.				
65 .	(A) Cone	(B) Circle	(C) Triangle	(D) Rectangle		
Ans.	(A)					
Sol.	Except, (A) all others are	2-D figures.				
66 .	(A) Kite	(B) Bird	(C) Radar	(D) Aeroplane		
Ans.	(C)		. ,			
Sol.	Except, (C) all others car	n fly.				
67.	(A) Palm	(B) Shoulder	(C) Knee	(D) Elbow		
Ans.	(A)					
Sol.	Except, (A) all others are	joints.				
68 .	(A) Rabbit	(B) Crocodile	(C) Sluggish	(D) Snails		
Ans.	(C)					
Sol.	Except, (C) all others are	living beings.				
69 .	(A) Short Vision	(B) Spondylitis	(C) Glaucoma	(D) Conjunctiv	vitis	
Ans.	(B)					
Sol.	Except, (B) all others are	eye related disease.				
70 .	(A) Amsterdam	(B) Europe	(C) Antarctica	(D) Australia		
Ans.	(A)					
Sol.	Except, (A) all others are	continents.				
	Instruction : Find out th	ne correct option by choosing	logically appropriate seque	nce.		
71.	1. Gujarat	2. Earth	3. Somnath	4. Universe	5. India	
	(A) 32154	(B) 24135	(C) 15243	(D) 31524		
Ans.	(D)					
Sol.	The required logical sequence is Somnath, Gujarat, India, Earth, Universe.					
72 .	1. Mother	2. Child	3. Milk	4. Crying	5. Smile	
	(A) 23145	(B) 12435	(C) 24135	(D) 15243		
Ans.	(C)					
Sol.	The required logical sequ	ence is Child, Crying, Mothe	r, Milk, Smile.			
73.	1. Rainbow	2. Rain	3. Sun	4. Happy	5. Child	
	(A) 42351	(B) 45123	(C) 21435	(D) 23154		
Ans.	(D)					
Sol.	The required logical sequ	ence is Rain, Sun, Rainbow,	Child, Happy.			

74.	1. Table	2. Tree (P) 45231	3. Wood	4. Seed	5. Plant
4.00	(A) 13243 (D)	(D) 43231	(C) 45521	(D) 12343	
Sol.	(D) The required logical seque	ence is Seed, Plant, Tree, Wo	ood, Table.		
75.	1. Snake	2. Grass	3. Eagle	4. Frog	5. Insect
	(A) 32145	(B) 52143	(C) 25413	(D) 24531	
Ans.	(C)				
Sol.	The required logical seque	ence is Grass, Insect, Frog, S	nake, Eagle.		
	Instruction : Follow the i	instruction and choose the c	correct option. (Q. No. 76 to	80)	
76 .	If $+$ means \div , \div means $-$,	– means \times and \times means	+ then $10 \div 2 - 15 + 3 \times 10^{-10}$	5 = ?	
	(A) 10	(B) 15	(C) 25	(D) 5	
Ans.	(D)				
Sol.	$10\div2-15+3\times5$				
	After substitution				
	$10 - 2 \times 15 \div 3$ 5				
	$= 10 - 2 \times 5 = 5$				
	= 10 - 10 5				
	= 10 - 10 - 0				
	= 10 10 5				
77					
11.					
	$13 \Delta 5 \bigstar 20 \bigcirc 10 \square$	9 = ?			
	(A) 26	(B) 14	(C) 37	(D) 55	
Ans.	(B)				
Sol.	After substitution then the equation will be				
	$13 + 5 \times 20 \div 10 - 9$				
	$13 5 \times 2 - 9$				
	$13 \ 10 - 9$				
	- 23 0				
	= 23 - 5				
78.	If A means $+$ B means $-$	C means ÷ and D means	x then $10 D 2 A 5 B 5 = ?$,	
	(A) 15	(B) 12	(C) 20	(D) 10	
Ans.	(C)	(2)	(0)=0	(2) 20	
Sol.	After substitution then th	ne equation will be			
	$10 \times 2 + 5 - 5$				
	20 5-5				
	- 25 - 5				
	= 20 - 0				
79 .	If $P = 6$, $J = 4$, $L = 8$, M	$I = 24$ then M \times J \div L + J	= ?		
	(A) 8	(B) 36	(C) 52	(D) 16	
Ans.	(D)		· /	<u> </u>	
Sol.	After substitution then the	ne equation will be			
	$24 \times 4 \div 8$ 4				
	$= 24 \times 0.5$ 4				
	12 4				
	16				
	10				

80.	If Δ means >, \square means	<, O means = and # mean	$s \mp and AOB, C\Delta D as v$	well as $D \square A$, then which of the
	following is true ?			
	(A) C # A	(B) $B \Delta D$	(C) B 🗖 D	(D) A 🗖 D
Ans.	(B)			
Sol.	After substitution then t	he equation will be		
	C D A B			
	Therefore, only option (B)) satisfies the condition.		
	Instruction : Follow the	instruction and choose the c	orrect option. (Q. No. 81 to	100)
81 .	If fourth Wednesday is on	$125^{ m th}$ of a month, what will $125^{ m th}$	be the date of Second Sund	ay of the same month?
	(A) 8	(B) 14	(C) 12	(D) 10
Ans.	(A)			
Sol.	Given that 25 th is fourth W	Vednesday, then 1 st of that n	nonth is Sunday. So, second	l Sunday will be on 8.
82 .	Today is Sunday. What da	ay will be there after 112 day	/s?	
	(A) Friday	(B) Sunday	(C) Wednesday	(D) Monday
Ans.	(B)			
Sol.	Given that today is Sunda	ay. And after 112 days there	will be 0 odd days. So,it wi	ll be Sunday.
83 .	15 th August, 2019 was Th	ursday. What day will be the	ere on 15 th August, 2020?	
	(A) Wednesday	(B) Friday	(C) Saturday	(D) Thursday
Ans.	(C)			
Sol.	As 2020 is a leap year, od	ld days will be two. So, two o	days after Thursday is Satur	rday.
84 .	Which of the following is a	a Leap Year?		
	(A) 1900 AD	(B) 2100 AD	(C) 1990 AD	(D) 2000 AD
Ans.	(D)			
Sol.	As the year given in all the	e options are century year so	for the year to be the leap y	year it should be divisible by 400.
	So, the leap year is 2000	AD.		
85 .	A box has 4 white, 5 gree	n and 6 yellow balls in it. By	how many ways can 3 ball	s be selected randomly from the
	box?			
	(A) 455	(B) 120	(C) 20	(D) 12
Ans.	(A)			
Sol.	White balls - 4	green balls - 5	yellow balls - 6	
		15	$15 \times 14 \times 13$	
	Number of ways to select	three balls = ${}^{15}C_3 \frac{15}{121\times}$	$\frac{10 \times 14 \times 10}{31}$ 455	
06		12:~		
80.	If 40 persons snake their r	ands with one another, what	at will be the total number o	I snaking hands?
	(A) 820	(B) 780	(C) 80	(D) 512
Ans.	(B)			
6-1	Nu	n(n-1) 40 × 39	h	
501.	Number of nandsnakes ar	$e: \frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$	J	
87.	Proportion ratio of the cu	crent age of A and B is $4:5$.	After 4 years, it will be 8 : 9	. What will be the sum of the age
	of both A and B ?	-	- /	5
	(A) 18 years	(B) 17 years	(C) 9 years	(D) 27 years
Ans.	(C)			
Sol.	Let age of $A = 4x$ and ad	ge of $B = 5x$		
		1 0		
	According to question, $\frac{4\pi}{2}$	$\frac{x}{4} = \frac{8}{2}$		
	51 52	x 4 9		

36x 36 40x 32 ∴ 4x 4 ∴x 1 Age of A = 4 years and age of B = 5 years Sum of ages of A and B is 4+5 = 9 years **88**. Sum of the current age of Jay and Vijay is 40 years. After 7 years, the proportion ration of their age will be 4:5. What will be the current age difference of both Jay and Vijay? (A) 5 (B) 9 (C) 13 (D) 6 Ans. (D) **Sol.** Let age of Jay is x and age of Vijay is 40 - xAccording to question, x 7 4 5 40 - x = 75x 35 188-4x 9x 153 x 17 Age of Jay is 17 years Age of Vijay is 40 - x = 23 years Difference is 23 - 17 = 6**89**. Father's age is four times more plus 3 years than son's age. Mother's age is 4 years more Father's age is four times more plus 3 years than son's age. than father's age. If son's age is 5 years, what will be the age of mother? (A) 19 years (B) 23 years (C) 27 years (D) 21 years Ans. (C) **Sol.** Age of Father is $4 \times 5 + 3 = 23$ years Age of Mother is 23 + 4 = 27 years **90**. What is your relationship with your uncle's wife's one and only sister - in - law's daughter? (A) Paternal Aunty (B) Maternal Aunty (C) Niece (D) Sister Ans. (D) Sol. Uncle's wife is aunty. Aunty's sister-in-law's will be your mother. Daughter of your mother will be your sister. 91. Tanvi walks 8 km in the south from her house. Then she turns left and walks 5 km. Again, she turns left and walks 8 km. How far is she from her house? (A) 3 km (B) 8 km (C) 5 km (D) 13 km Ans. (C) 5 km Sol. House 8 km 8 km 5 km She is 5 km far away from her house. **92**. Rehan walks 5 km in the east. Then, he turns perpendicularly left and walks 12 km. Now, at least how many kilometres will be have to walk to come back to the starting point? (A) 7 km (B) 17 km (C) 8.5 km (D) 13 km

16

Ans.	(D)				
Sol.	Total number of students = $(x + y) - 1$				
	37 = (17 + y) - 1				
	38 = 17 + y				
	y = 21				
97 .	In a row, Joseph is at 15 th p	position from the left side an	d at 13 th position from the ri	ght side. How many boys will be	
	there in that row?				
	(A) 29	(B) 28	(C) 25	(D) 27	
Ans.	(D)				
Sol.	Total number of students :	= (x + y) - 1			
	Total students = $(15 + 13)$	8) – 1			
	Total students $= 28 - 1$				
	Total students $= 27$				
98 .	Basil is taller than Arbutus	s. Pomegranate is shorter th	nan Hibiscus. Basil is taller t	than Pomegranate. If Arbutus is	
	taller than Pomegranate, v	which will be the shortest pla	nnt?		
	(A) Pomegranate	(B) Basil	(C) Hibiscus	(D) Arbutus	
Ans.	(A)				
Sol.	B > A, H > P, B > P, A >	> P			
	Therefore, Pomegranate is	the shortest plant.			
99 .	'M' is bigger than 'P'. 'R'	is smaller than 'K'. If 'K' is s	smaller than 'M', then, who	is the biggest among all?	
	(A) K	(B) M	(C) P	(D) R	
Ans.	(B)				
Sol.	M > P, K > R, M > K				
	Therefore, M is the biggest	among all.			
100 .	The Rajdhani is longer than the Shatabdi. The Deccan is longer than the Memu. The Shatabdi is longer than the				
	Memu. Which train has the least length?				
	(A) Memu	(B) Shatabdi	(C) Rajdhani	(D) Deccan	
Ans.	(A)				
Sol.	R > S, D > M, S > M				
	Therefore, Memu has the l	east length.			