Part - B
Logical Reasoning

Q4. 1, 2, 4, 7, 11 _____.
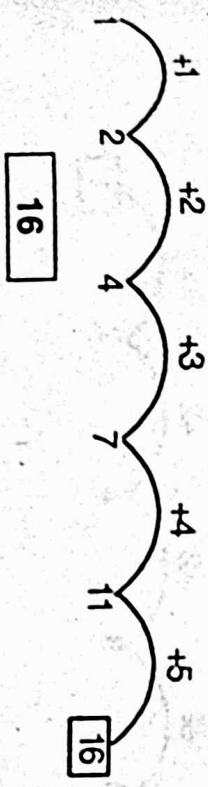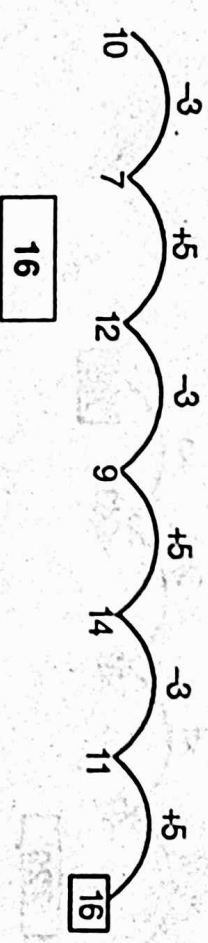
1 $\overset{+1}{\frown}$ 2 $\overset{+2}{\frown}$ 4 $\overset{+3}{\frown}$ 7 $\overset{+4}{\frown}$ 11 $\overset{+5}{\frown}$ 16

Answer: 16

Q5. 3, 6, 12, 21, 33, 48 _____.
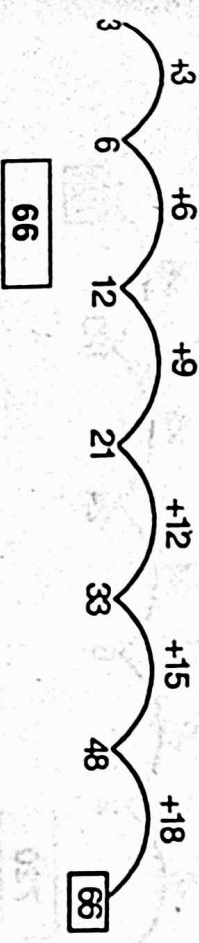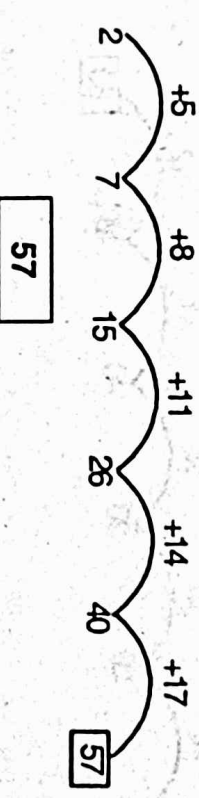
3 $\overset{+3}{\frown}$ 6 $\overset{+6}{\frown}$ 12 $\overset{+9}{\frown}$ 21 $\overset{+12}{\frown}$ 33 $\overset{+15}{\frown}$ 48 $\overset{+18}{\frown}$ 66

Answer: 66

Q6. 10, 15, 5, 10, 0, 5 _____.

10 $\overset{+5}{\frown}$ 15 $\overset{-10}{\frown}$ 5 $\overset{+5}{\frown}$ 10 $\overset{-10}{\frown}$ 0 $\overset{+5}{\frown}$ 5 $\overset{-10}{\frown}$ -5

Answer: -5

Q7. 2, 6, 12, 20, 30 _____.

2 $\overset{+4}{\frown}$ 6 $\overset{+6}{\frown}$ 12 $\overset{+8}{\frown}$ 20 $\overset{+10}{\frown}$ 30 $\overset{+12}{\frown}$ 42

Answer: 42

Q8. 10, 7, 12, 9, 14, 11 _____.

10 $\overset{-3}{\frown}$ 7 $\overset{+5}{\frown}$ 12 $\overset{-3}{\frown}$ 9 $\overset{+5}{\frown}$ 14 $\overset{-3}{\frown}$ 11 $\overset{+5}{\frown}$ 16

Answer: 16

Q9. 2, 7, 15, 26, 40 _____.

2 $\overset{+5}{\frown}$ 7 $\overset{+8}{\frown}$ 15 $\overset{+11}{\frown}$ 26 $\overset{+14}{\frown}$ 40 $\overset{+17}{\frown}$ 57

Answer: 57

Q10. 0, 1, -1, 0, -2, -1 _____.

0 $\overset{+1}{\frown}$ 1 $\overset{-2}{\frown}$ -1 $\overset{+1}{\frown}$ 0 $\overset{-2}{\frown}$ -2 $\overset{+1}{\frown}$ -1 $\overset{-2}{\frown}$ -3

Answer: -3

Q11. 2, 4, 8, 16, 32 _____.

2 $\overset{\times 2}{\frown}$ 4 $\overset{\times 2}{\frown}$ 8 $\overset{\times 2}{\frown}$ 16 $\overset{\times 2}{\frown}$ 32 $\overset{\times 2}{\frown}$ 64
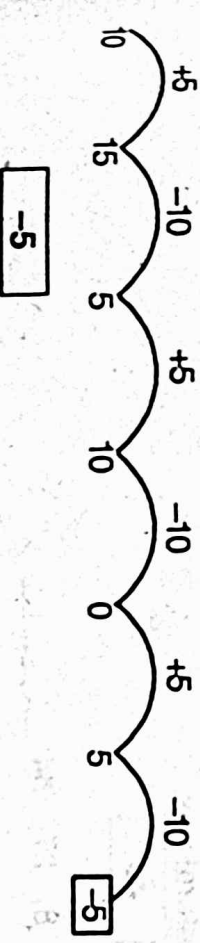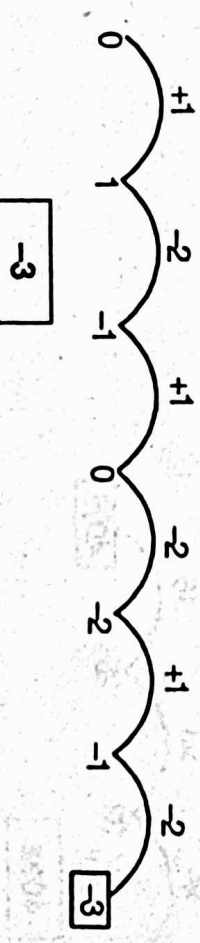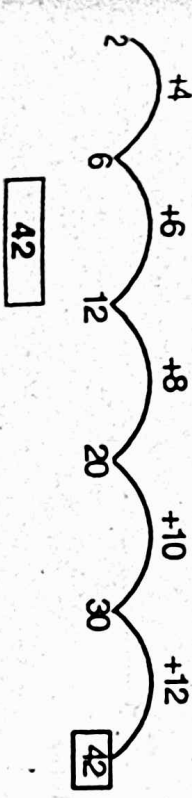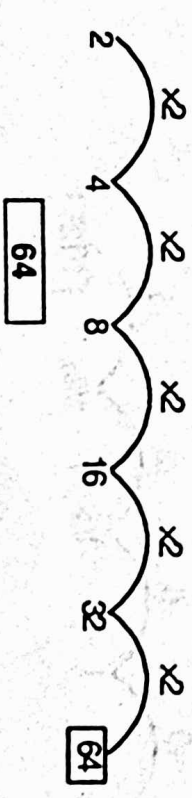
Answer: 64

Q12. 3, 9, -27, -81, +243 _____ .

Answer:

3 ×3 9 ×(-3) -27 ×3 -81 ×(-3) +243 ×3 [729]
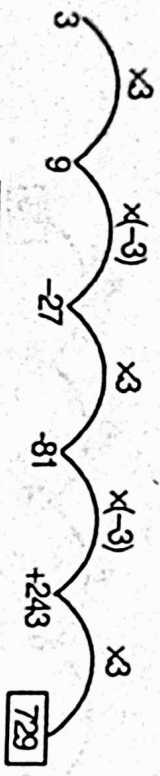
[729]

Q13. 5, 10, 10, 20, 20, 40, 40 _____ .

Answer:

5 ×2 10 ×1 10 ×2 20 ×1 20 ×2 40 ×1 40 ×2 [80]
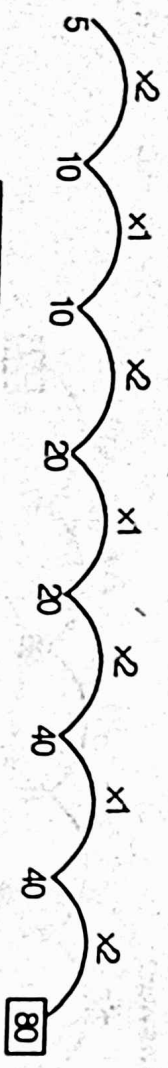
[80]

Q14. 4, 8, 32, 256 _____ .

Answer:

4 ×2 8 ×4 32 ×8 256 ×16 [4096]

[4096]

Q15. 125, 25, 5, 1, 1/5, 1/25 _____ .

Answer:

125 ÷5 25 ÷5 5 ÷5 1 ÷5 1/5 ÷5 1/25 ÷5 [1/125]
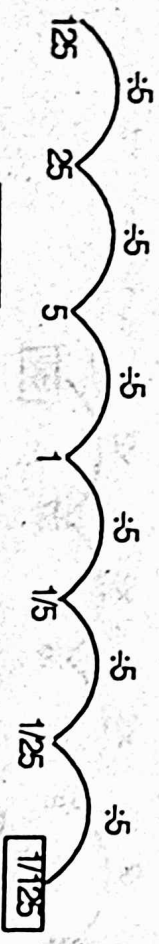
[1/125]

Q16. 64, 32, 16, 8, 4, 2 _____ .

Answer:

64 ÷2 32 ÷2 16 ÷2 8 ÷2 4 ÷2 2 ÷2 [1]

[1]

Q17. 1, 1, 2, 6, 24, 120 _____ .

Answer:

1 ×1 1 ×2 2 ×3 6 ×4 24 ×5 120 ×6 [720]
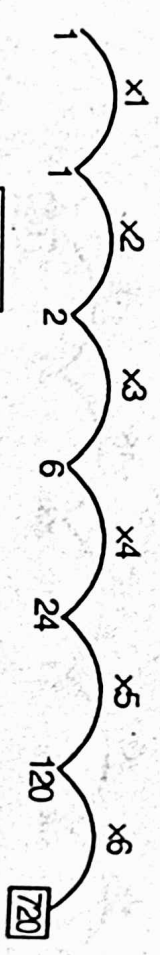
[720]

Q18. 1, 4, 9, 16, 25, 36 _____ .

Answer:
Square of natural nos.

[49]

Q19. 0, 1, 8, 27, 64 _____ .

Answer:
Cube of whole nos.

[125]

Q20. 4, 16, 36, 64, 100 _____ .

Answer:
Square of even natural no.

[144]

Q29. 3, 6, 18, 36, 108 _____.
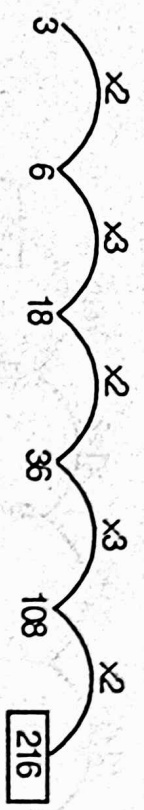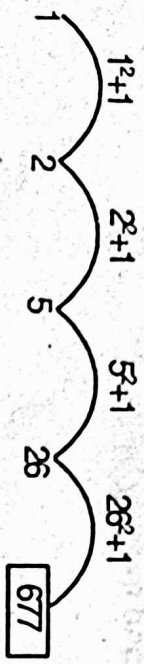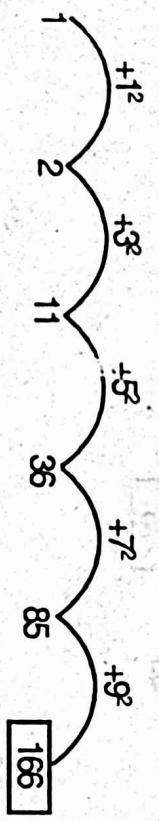
3 ×2 6 ×3 18 ×2 36 ×3 108 ×2 [216]

Answer: 216

Q30. 1, 2, 5, 26 _____

1 1^2+1 2 2^2+1 5 5^2+1 26 26^2+1 [677]

Answer: 677

Q31. 1, 2, 11, 36, 85 _____

1 $+1^2$ 2 $+3^2$ 11 $+5^2$ 36 $+7^2$ 85 $+9^2$ [166]

Answer: 166

Q32. 0, 1, 5, 14, 30 _____

0 $+1^2$ 1 $+2^2$ 5 $+3^2$ 14 $+4^2$ 30 $+5^2$ [55]

Answer: 55

Q33. 1, 5, 21, 57 _____

1 $+2^2$ 5 $+4^2$ 21 $+6^2$ 57 $+8^2$ [121]

Answer: 121

Q34. 2, 6, 12, 36, 72 _____

2 ×3 6 ×2 12 ×3 36 ×2 72 ×3 [216]

Answer: 216

Q35. 5, 7, 10, 14, 19 _____

5 +2 7 +3 10 +4 14 +5 19 +6 [25]

Answer: 25

Q36. 2, 4, 6, 12, 18 _____

2 ×2 4 ×1.5 6 ×2 12 ×1.5 18 ×2 [36]
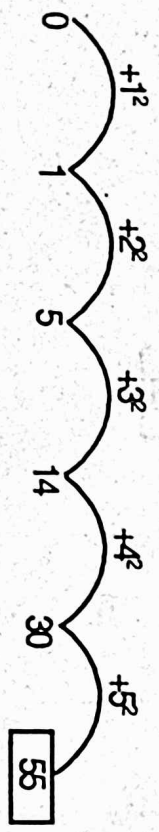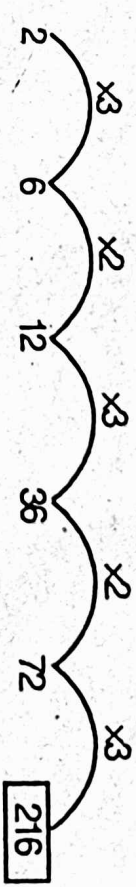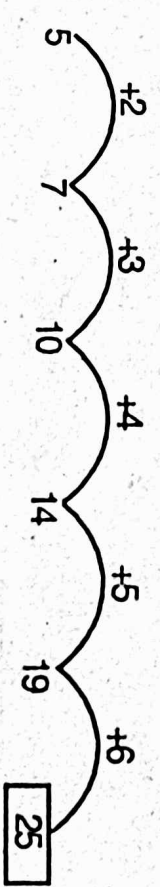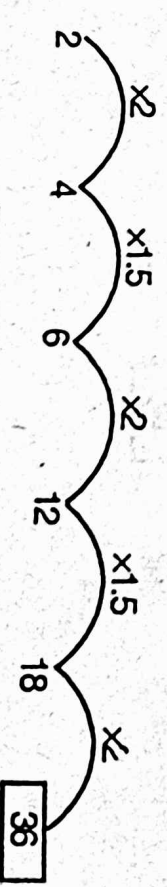
Answer: 36

Q46. 1, 2, 6, 15 _____.

Answer:
$1+0^2$, 1^2+1^2, $1+1^2+2^2$, $1+1^2+2^2+3^2$
$1+1^2+2^2+3^2+4^2$

31

Q47. SCD, TEF, UGH _____ WKL.

(a) CNM (b) VJI
(c) VIJ (d) IJT

Answer:
There are two identical series here. The first series is with the first letter only.
The second series involves the remaining letters CD, EF, GH, IJ, KL.

VIJ

Q48. C_3DE, CD_4E, CDE_5 _____ CD_7E.

(a) CDE (b) CDE_5
(c) C_6DE (d) CDE_4

Answer:
Letters are same change number only adding 1 in the previous one.

C_6DE

Q49. CMM, EOO, GQQ _____ KUU.

(a) GRR (b) GSS
(c) ISS (d) ITT

Answer:
The first letter will be in order CEGIK, and 2nd and 3rd letter is repeated.

ISS

Q50. ZA_5, Y_4B, XC_6, W_3D _____.

(a) E_6V (b) U_2E
(c) VE_5 (d) VE_7

Answer:
The 1st letter are alphabetically reverse, 2nd letter are in alphabetic numbers are 5, 4, 6, 3, 7.

VE_7

Q51. QPO, NML, KJI, HGF _____.

(a) EDC (b) HGE
(c) CAB (d) GHI

Answer:
This series consists of letters in a reverse alphabetic order.

EDC

Q52. AOU, BPV, CQW, DRX _____.

(a) ESY (b) JAK
(c) PFQ (d) MEN

Answer:
Follow an alphabetic order.

ESY

Q53. 1AZ, 2BY, 3CX, 4DW _____.

(a) 5EV (b) 6EU
(c) 7AE (d) 5FO

Answer:

5EV

Q54. BCB, DED, FGF, HIH _____.

(a) HJH (b) JKJ
(c) KJK (d) HKH

Answer:
Follow an simple alphabetic order.

JKJ

055. A5A, C10C, E15E, G20G _____

(a) I25I
(b) I20I
(c) J25J
(d) K20K

Answer:

Follow an simple alphabetic order.

I25I

056. QAR, RAS, SAT, TAU _____

(a) UAV
(b) UAT
(c) TAS
(d) TAT

Answer:

In this 3rd letter will be the first letter in next and 3rd letter is in order.

UAV

057. AZ, BY, CX, DW _____.

(a) EV
(b) FV
(c) VF
(d) DV

Answer:

Simple forward and Backward steps.

EV

058. AZ, CX, FU _____.

(a) BC
(b) JQ
(c) KP
(d) PW

Answer:

First letter move forward by first, second, third _____ terms. Second letter move forward and backwards.

JQ

Q59. AZ, GT, MN _____ YB.

(a) KF
(b) XR
(c) HS
(d) SH

Answer:

Moved forward and backward by six steps.

SH

Q60. CE, GI, KM, OQ _____.

(a) TW
(b) TV
(c) TU
(d) SU

Answer:

Letters of each term is alternate.

SU

Q61. D2E, H4J, L6O, P8T _____.

(a) T10Y
(b) U5V
(c) L7O
(d) X10Y

Answer:

First letter place is multiple of 4 while 3rd letter is multiple of 5.

T10Y

Q62. CAT, FDW, IGZ _____.

(a) KJA
(b) TUV
(c) HDC
(d) LJC

Answer:

All the letters of each terms moved three steps forward to obtain the corresponding letters.

LJC

Q63. BEH, KNQ, TWZ ____

(a) IJL (b) IFC
(c) CFI (d) RBI

Answer:
Each letter moved a steps forward.

CFI

Q64. FLP, INS, LPV ____

(a) ORY (b) UXZ
(c) VXY (d) SVW

Answer:
1st and 3rd letter moved 3 steps which 2nd letter moved 2 steps.

ORY

Q65. LXF, MTJ, NPN, OLR ____

(a) HAV (b) PHV
(c) PIU (d) PKX

Answer:
1st letter moved one step forward 2nd letter moved 4 step backward 3rd letter moved 4 step forward.

PHV

Q66. AB, BA, ABC, CBA, ABCD ____

(a) DCBA (b) DCAB
(c) ABDC (d) BACD

Answer:
Inverse in next step.

DCBA

Q67. Coding and De-coding

Some words are stand for some another words which is known code of the word. Process of replacing some words by code word is known as coding. Decoding is reverse of coding.

The coding and Decoding is classified mainly into two types.

1. Letter coding
2. Numeric coding.

Letter Coding:
In this case Alphabets replaced by certain other Alphabets According to specific rule.

Numeric Coding:
In this case numeric values or letters can be changed according to specific rule.

Q68. MADRAS is coded as NBESBT, how is BOMBAY coded in that code?

Answer:
Each letter moved one step forward.

CPNCBZ

Q69. In a certain code, TRIPPLE is written as SQHOOKD. How is DISPOSE written in that code?

Answer:
Moved one step backward

CHRONRD

Q70. In a certain code, MONKEY is written as XDJMNL. How TIGER can be coded?

Answer:
First write the letter of the word in reverse order and then moved one step backward.

QDFHS

2018 - MAY

[1] In a certain code, RIPPLE is written as 613382 and LIFE is written as 8192. How is PILLER written in that code?

(a) 318826
(b) 318286
(c) 618826
(d) 338816

Answer:

(a)

R	I	P	P	L	E
↓	↓	↓	↓	↓	↓
6	1	3	3	8	2

L	I	F	E
↓	↓	↓	↓
8	1	9	2

(1 mark)

P	I	L	L	E	R
↓	↓	↓	↓	↓	↓
3	1	8	8	2	6

[2] In a certain code '256' means 'you are good', '637' means 'we are bad' and '358' means 'good and bad'. Which of the following represents 'and' in that code?

(a) 2   (b) 5

(c) 8   (d) 3

Answer: (c)   (1 mark)

(1)   2   5   6   →   You   Are   Good

(2)   6   3   7   →   We   Are   Bad

(3)   3   5   8   →   Good   And   Bad

In the first and second codes, i.e., 256 and 637, we can see that the common digit is 6. Also, if we look at their corresponding phrases, i.e., "You Are Good", and "We Are Bad", we can see that the word "Are" is common. Therefore, 6 is the code for "Are".

Similarly, in the first and third codes, i.e., 256 and 358, we can see that the common digit is 5. Also, if we look at their corresponding phrases, i.e., "You Are Good", and "Good And Bad", we can see that the word "Good" is common. Therefore, 5 is the code for "Good".

Similarly, in the second and third codes, i.e., 637 and 358, we can see that the common digit is 3. Also, if we look at their corresponding phrases, i.e., "We Are Bad", and "Good And Bad", we can see that word "Bad" is common. Therefore, 3 is the code for "Bad".

Now, let's look at the last code along with its corresponding phrase:

358 → Good And Bad

We know that 3 corresponds to "Bad", and 5 corresponds to "Good". Therefore, 8 would correspond to "And".

[3] If LOSE is coded as 1357 and GAIN is coded as 2468, what do figure 82146 for ?

(a) NGLAI   (b) NGLIA

(c) GNLIA   (d) GNLA   (1 mark)

Answer: (a)

L	O	S	E		G	A		N
1	3	5	7		2	4	6	8

8		2		1		4		6		N
N		G		L		A		I		

P	L	A	Y		R	H	Y	M	E
8	1	2	3		4	9	3	6	7

M	A		L	E
6	2		1	7

2018 - NOVEMBER

[4] If PLAY is coded as 8123 and RHYME is coded as 49367. What will be code of MALE?

(a) 6217   (b) 6198
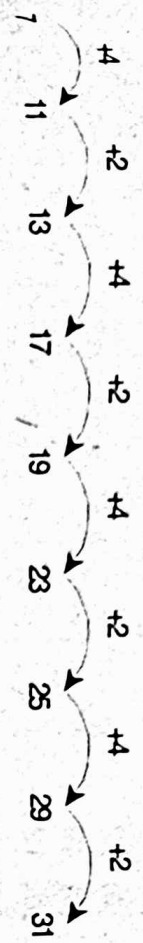
(c) 6395   (d) 6285   (1 mark)

Answer: (a)

[5] Find out the next number in the following series 7, 11, 13, 17, 19, 23, 25, 29?

(a) 30
(b) 31
(c) 32
(d) 33

Answer:
(b)

7 +4 11 +2 13 +4 17 +2 19 +4 23 +2 25 +4 29 +2 31

(1 mark)

[6] If HONEY is coded as JQPGA, which word is code as VCTIGVU?

(a) CARPETS
(b) TRAPETS
(c) TARGETS
(d) UMBRELU

Answer:
(c)

H	O	N	E	Y
+2 ↓	+2 ↓	+2 ↓	+2 ↓	+2 ↓
J	Q	P	G	A

We can see from above that coding is done by adding 2 to each letter of the word. The question asks us the word, for which the code is VCTIGVU. This means we'll have to subtract 2 from each of the letter of the word to decodify it.

V	C	T	I	G	V	U
-2 ↓	-2 ↓	-2 ↓	-2 ↓	-2 ↓	-2 ↓	-2 ↓
T	A	R	G	E	T	S

(1 mark)

[7] Find odd man out of the following series 15, 21, 63, 81, 69

(a) 15
(b) 21
(c) 63
(d) 81

Answer:
(d) 81 is the only perfect square

[8] Find odd man out of the following series 7, 9, 13, 17, 19

(a) 7
(b) 9
(c) 19
(d) 13

Answer:
(b) All the numbers are prime except 9

(1 mark)

[9] Find the next number in the series:
7,23,47,119,167

(a) 211
(b) 223
(c) 287
(d) 319

Answer:
(c) $3^2 - 2 = 7$; $5^2 - 2 = 23$; $7^2 - 2 = 47$; $11^2 - 2 = 119$; $13^2 - 2 = 167$.

Therefore, we can see that every number in the sequence is 2 less than the square of a prime number. The next prime number after 13 is 17. Therefore, the next number in the series will be $17^2 - 2 = 287$.

(1 mark)

[10] Which of the following is odd one 4,12,44,176, 890 ....

(a) 4
(b) 12
(c) 44
(d) 176

Answer:
(c)

$(4 \times 2) + 4 = 12$
$(12 \times 3) + 6 = 42$
$(42 \times 4) + 8 = 176$
$(176 \times 5) + 10 = 890$

Therefore, clearly, 44 is the odd one out as it should have been 42.

[25] Find the next term $\frac{1}{2}, \frac{3}{4}, \frac{5}{8}, \frac{7}{16}, ?$

(a) 9/32
(b) 10/17
(c) 11/34
(d) 12/35

Answer:

(a) Numerator → 1 + 2 = 3; 3 + 2 = 5; 5 + 2 = 7; 7 + 2 = 9

Denominator → 2 × 2 = 4; 4 × 2 = 8; 8 × 2 = 16; 16 × 2 =.32

(1 mark)

[26] Find the missing term: P 3 C, R 5 F, T 8 I, V 12 L, ?

(a) Y17O
(b) X17M
(c) X17O
(d) X16O

Answer:

(c) First letter → P + 2 = R; R + 2 = T; T + 2 = V; V + 2 = X
Number → 3 + 2 = 5; 5 + 3 = 8; 8 + 4 = 12; 12 + 5 = 17
Third letter → C + 3 = F; F + 3 = I; I + 3 = L; L + 3 = O
Therefore, X17O

(1 mark)

[27] Find out the odd man out in the Sequence 8, 25, 64, 125, 216.

(a) 25
(b) 64
(c) 125
(d) 216

Answer:

(a) The sequence is $2^3 = 8$; $3^3 = 27$; $4^3 = 64$; $5^3 = 125$; $6^3 = 216$
In place of 27, we have 25, therefore, 25 is the odd one out.

(1 mark)

[28] In a certain Code Language BEAT is written as YVZG, then what will be Code for MILD?

(a) ONRW
(b) NOWR
(c) ONWR
(d) NROW

Answer:

(d)

Backward	26	25	24	23	22	21	20	19	18	17	16	15	14
Forward	1	2	3	4	5	6	7	8	9	10	11	12	13
	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	14	15	16	17	18	19	20	21	22	23	24	25	26
Backward	13	12	11	10	9	8	7	6	5	4	3	2	1

B is the second letter moving forwards, and Y is the second letter moving backwards. Similarly, E is the 5th letter moving forwards, and Y is the first letter moving forwards, and Z is the first letter moving backwards. A is the first letter moving forwards, and Z is the first letter moving backwards. T is the 20th letter moving forwards, and G is the 20th letter moving backwards.

Now, we have to code MILD.

M is the 13th letter moving forwards, N is the 13th letter moving backwards. I is the 9th letter moving forwards, R is the 9th letter moving backwards. L is the 12th letter moving forwards, O is the 12th letter moving backwards. D is the 4th letter moving forwards, W is the 4th letter moving backwards.

Therefore, the code for MILD is NROW.

(1 mark)

[29] In a certain code RIPPLE is written as 613382, and LIFE is written as 8192. How will RIFFLE be written in that code?

(a) 618892
(b) 689912
(c) 619982
(d) 629981

(1 mark)

Answer:

(c)

R	I	P	P	L	E
↓	↓	↓	↓	↓	↓
6	1	3	3	8	2

R	I	F	F	L	E
↓	↓	↓	↓	↓	↓
3	1	9	9	8	2

L	I	F	E
↓	↓	↓	↓
8	1	9	2

[30] Choose the missing term in the series.

1, 1, 8, 4, 27, ____, 64, 16

(a) 27
(b) 11
(c) 9
(d) 125

Answer:
(c) The series n^3, n^2

For $n = 1$, we have $1^3 = 1$; $1^2 = 1$
For $n = 2$, we have $2^3 = 8$; $2^2 = 4$
For $n = 3$, we have $3^3 = 27$; $3^2 = 9$

(1 mark)

[31] If DELHI is coded as EFMIJ then JAIPUR is coded as ____

(a) JQVSBK
(b) QVSKBJ
(c) BJQVSK
(d) KBJQVS

(1 mark)

Answer:

(d) D + 1 = E; E + 1 = F; L + 1 = M; H + 1 = I; I + 1 = J
Therefore, J + 1 = K; A + 1 = B; I + 1 = J; P + 1 = Q; U + 1 = V;
+ 1 = S

[32] If FRAME is coded as 0618011305 then ARISE is coded as ____

(a) 0118091905
(b) 0119091805
(c) 0118190905
(d) 0118091805

Answer:

(a) F is the 6th letter of the English Alphabet, so the code of F is 06 and so on.
Therefore, the code of ARISE will be 01 18 09 19 05

(1 mark)

[33] The wrong term in the series 225, 196, 169, 144, 121, 100, 77, 64, ...

(a) 121
(b) 77
(c) 100
(d) 169

Answer:

(b) All the numbers are squares of some numbers, but not 77.

(1 mark)

[34] If CLOCK is coded as 34235 and TIME as 8679, then MOTEL is coded as:

(a) 27894
(b) 72964
(c) 72894
(d) 77684

Answer:

(c)

C	L	O	C	K		T	I	M	E
↓	↓	↓	↓	↓		↓	↓	↓	↓
3	4	2	3	5		8	6	7	9

M	O	T	E	L
↓	↓	↓	↓	↓
7	2	8	9	4

(1 mark)