

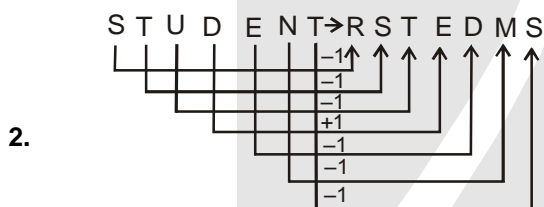
NTSE STAGE-II (2013)

CLASS-X [MAT]

HINTS & SOLUTIONS

ANSWER KEY

Ques.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans	1	3	4	2	3	2	4	1	3	3	2	1	2	1	3
Ques.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Ans	2	3	1	4	4	1	3	1	4	1	2	1	4	1	3
Ques.	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Ans	1	3	2	1	3	4	3	1	3	2	1	1	3	3	3
Ques.	46	47	48	49	50										
Ans	2	4	2	4	1										



4. $\alpha | \beta\beta | \alpha\alpha\alpha | \beta\beta\beta\beta | \alpha\alpha\alpha\alpha | \beta\beta\beta \dots$

5. The no. in third column = No. in first column – No. in second column

$$C_3 \Rightarrow C_1 - C_2$$

same in the rows

$$R_3 = R_1 - R_2$$

8. Pythagorean Triplet

$$x^2 + y^2 = z^2$$

9. $(79 + 65)^{1/2} - (37 + 12)^{1/2}$
= 5

10. $n^n - n$

11. $n^3 - n$

15. $3^n + (-1)^n$

23. $(625 + 104)^{1/3} - (115 + 101)^{1/3} = 3$

26. long candle length $\rightarrow \ell$
short candle length $\rightarrow s$

in 1 hr long Candle burn = $\frac{\ell}{5}$

so in 2 hr long candle burn = $\frac{2\ell}{5}$

long candle left = $\ell - \frac{2\ell}{5} = \frac{3\ell}{5}$

In 1 hr short candle burn = $\frac{s}{3.5}$

So in 2 hr short candle burn = $\frac{2 \times s}{3.5}$

short candle left = $s - \frac{2s}{3.5} = \frac{1.5s}{3.5}$

$$s = \frac{3 \times 3.5}{5 \times 1.5} \ell$$

$$s = \frac{7}{5} \ell, \text{ so } \frac{\ell}{s} = \frac{5}{7}$$

27. Total toys = x

No. of dolls = x – 6

No. of car = x – 6

No. of books = x – 6

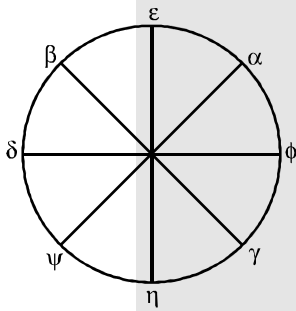
ATQ

$$x - 6 + x - 6 + x - 6 = x$$

$$3x - 18 = x$$

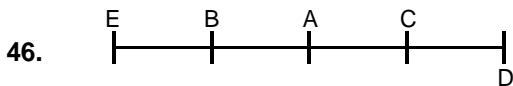
$$x = 9$$

30. No. of buffalos = x
 No of cows = $2x$
 $x + 2x = 60$
 $3x = 60$
 $x = 20$
 No of cows = 40
 No of buffalos = 20
 As buffalo X is 17th
 So 16 Animal ahead of x
 out of which 9 are cows
 so $16 - 9 = 7$ are buffalos
 So no. of buffalos below
 X = $[20 - (7 + 1)] = 12$



32.-36.

37. In every one match are person in eliminated so when 118 match is completed than 118 person eliminated. So only two peron left and finally 119 match in which one person is eliminate and one wins.
38. Sadhana < Ravi < Alka < Lata < Asha.
39. First group $\Rightarrow 5 + 4 + 3 + 2 + 1 \Rightarrow 15$
 Total match = $15 \times 4 + 2 + 1 + 1 = 64$



Resonance
 Educating for better tomorrow