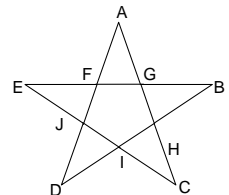


**NTSE (MENTAL ABILITY TEST) ON 02.11.2014  
SOLUTION**

1. 0,3,9,18,30  
 $\Rightarrow 30 + 15 = 45$
2. 6,9,18,21,30  
 Alternate series difference is common  
 $\therefore 30 + 3 = 33$
3.  $\rightarrow 16 \times 4 = 64 = 8^2$   
 $\rightarrow 3 \times 27 = 81 = 9^2$   
 $\rightarrow 18 \times 8 = 144 = 12^2$
4. (first row 1<sup>st</sup> value) x (second row 1<sup>st</sup> value - 1)  
 $\Rightarrow (1) 5 \times (8 - 1) = 35$   
 $\Rightarrow (2) 3 \times (10 - 1) = 27$   
 $\Rightarrow (3) 3 \times (8 - 1) = 21$
5. Sum of outer digits x 3 and .....  
 i.e.,  
 $\Rightarrow (4 + 6 + 3 + 5) \times 3 = 18 \times 3 = 54$   
 $\Rightarrow (2 + 3 + 6 + 5) \times 4 = 16 \times 4 = 64$   
 $\Rightarrow (3 + 5 + 7 + 9) \times 5 = 120$
6. Multiply opp digits & subtract  
 $\therefore$   
 $\rightarrow (8 \times 9) - (2 \times 3) = 72 - 6 = 66$   
 $\rightarrow (7 \times 8) - (3 \times 4) = 56 - 12 = 44$   
 $\rightarrow (9 \times 11) - (6 \times 5) = 99 - 30 = 69$
7.  $\rightarrow 1^2 + 1 = 2, 3^2 + 1 = 10, 5^2 + 1 = 26$   
 $\rightarrow 2^2 + 1 = 5, 4^2 + 1 = 17, 6^2 + 1 = 37$   
 $\rightarrow 5^2 + 1 = 26, 7^2 + 1 = 50, 9^2 + 1 = 82$
8. Addition of opp number and subtract result one from another  
 $\rightarrow (125 + 18) - (51 + 21) = 71$   
 $\rightarrow (56 + x) - (45 + 39) = 111$   
 $\Rightarrow x = 139$
9. Multiply opp number and add result one of another  
 $\rightarrow (12 \times 6) + (4 \times 8) = 72 + 32 = 104$   
 $\rightarrow (4 \times 7) + (3 \times 6) = 28 + 18 = 46$   
 $\rightarrow (8 \times 4) + (168) = 32 + 128 = 160$
10. No. of Triangles AFG, BGH, CHI, DIJ, EJF, FDB, GEC, HAD, IEB, JAC  
 $\therefore$  Total = 10



11. No. of square  $1 \times 1$  squares = 9  
 $2 \times 2$  squares = 4  
 1 Big squares = 1  
 $\therefore$  Total = 14

12.  $2 \times 5 = 2^3 (2^3 + 5^2), 5^2 = 83325$   
 $4 \times 6 = 4^3 (4^3 + 6^2) 6^2 = 6410036$   
 $3 \times 7 = 3^3 (3^3 + 7^3) 7^2 = 9277649$   
 $5 \times 9 = 5^3 (5^3 + 9^3) 9^3 = 12520681$

13. Sum of two numbers of sides and square  
 $\Rightarrow (2 + 3)^2 = 25$   
 $\Rightarrow (15 + 6)^2 = 441$   
 $\Rightarrow (10 + 7)^2 = 289$   
 $\Rightarrow (13 + 12)^2 = 625$

14. (a) B F J N      (b) B F J N  
       ↓ ↓ ↓ ↓      ↓ ↓ ↓ ↓  
       Y U Q M      Y U Q M
- (c) G L Q V      (d) K O S W  
       ↓ ↓ ↓ ↓      ↓ ↓ ↓ ↓  
       T O J E      P L H D

15. In number its series difference  
 $\Rightarrow 23, 21, 18, 14, 9, 3$   
 In letter its difference is increasing  
 D, F, I, M, R, (x)  
 1 2 3 4  
 $\therefore 3/x$

16. D

17. B

18. C

19. D

20. A

21. Given 6, 2, 4 are adjacent and again 6, 2, 3 are adjacent  
 $\therefore$  Directly we can say that 4 is opp to 3

22. 2 P 4 Q 6 R S 1 R 3 Q 5 P 7  
 $\rightarrow 2 + 4 - 6 \times 8 \div 1 \times 3 - 5 + 7$   
 $\rightarrow$  BODMAS RULES  $\Rightarrow 2 + 4 - (6 \times 8 \times 3) - 5 + 7$   
 $= 6 - 144 + 2 = -136$

23. 64, 71, 80, 91, 104, 119, 135, 155

→ 119 + 117 = 136

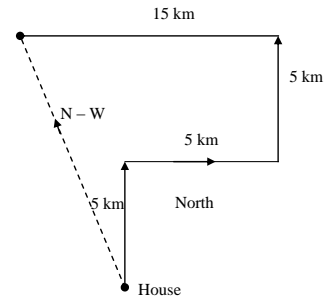
ADD ONE – 135

24. D

25.  $\begin{matrix} \square & + & \square & \square \\ 0.5, & 0.55, & 0.65, & 0.8 \end{matrix}$   
 $\begin{matrix} \underbrace{\phantom{0.5, 0.55, 0.65, 0.8}}_{+0.05} & \underbrace{\phantom{0.5, 0.55, 0.65, 0.8}}_{+0.15} \end{matrix}$

⇒ 0.8 + 0.1.0

26. NORTH – WEST



27.  $A \times E = C, H \times L = J, P \times T = R$

⇒  $J \times (L \times P) = J \times (N)$

= L

Middle values for multiplication

28. Allocating number of given letters

ie., B → 2

29. P O U N D      ⇒ E N G L I S H  
 ↓ ↓ ↓ ↓ ↓      ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓  
 M L R K A      B K D I F P E

COMMON DIFFERENCE IS 2

30. S H I N E, V E M J J, X B Q F O?

→ going in sequence variation option : (2)

31. 4

32. Pen is used write in paper like chalk is used to write black board

33. → 7 + 13 = 20

40. 351 → students like maths

197 → we are students

748 → they are parents

7 → are students →

∴ we → 9

41. BROTHER → 2 + 18 + 15 + 20 + 8 + 5 + 18 = 86

FATHER → 6 + 1 + 20 + 8 + 5 + 18 = 58

SISTER → 19 + 9 + 19 + 20 + 5 + 18 = 90

Like MOTHER = 13 + 15 + 20 + 8 + 5 + 18 = 79

42. 5<sup>th</sup> is four days earlier of Wednesday  
→ 5<sup>th</sup> = Saturday  
→ 28<sup>th</sup> day means =  $28 - 5 = 23$   
→  $23/7 = 2$  → remainder  
→ 28<sup>th</sup> day is Monday
43. Moving the object in a sequence clock wise direction option
44. Objects moving anticlockwise is getting outer and objects moving clockwise getting inner.
45. Step 1 : exchanging positions of adjacent figures  
Step 2 : exchanging positions of alternate figures
- Repeat step (1) & (2) continuously
46. Objects going clock – wise and adding clours
48. BLAME  
Because, 'M' is not there is given word "ERYTHROBLAST"
49. Virus is different because Aries, Aquarius, and pisces are zodiacs
50. In letter & numbers are going with common differ.  
M6

**ANSWER KEY:**

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