

NATIONAL TALENT SEARCH EXAMINATION-2018, RAJASTHAN

MENTAL ABILITY TEST (MAT) HINTS & SOLUTIONS

1. (2)

G,	K,	O,	S,	W
7	11	15	19	23
+	+	+	+	+
4	4	4	4	4

2. (4)

DX,	HT,	KQ,	OM,	RJ
4	24	8	20	11
24	8	20	11	17
Sum = 28	28	28	28	28

3. (1)

H,	D,	A,	Y,	X	X
8	4	1	25	24	24
↘	↗	↘	↗	↘	↗
-4	-3	-2	-1	0	

4. (3)

K L E,	I N D,	G P C,	E R B,	C T A
11 12 5	9 14 4	7 16 3	5 18 2	3 20 1
↘	↗	↘	↗	↘
+2	+2	+2	+2	+2
↗	↘	↗	↘	↗
-2	-2	-2	-2	-2

5. (2)

4, 9, 25, 49, 121, 169

$2^2, 3^2, 5^2, \underline{7^2}, 11^2, 13^2$

Hint : Square of prime number.

6. (1)

1,	3,	7,	13,	21,	<u>31</u> ,	43,	57
↘	↗	↘	↗	↘	↗	↘	↗
+2	+4	+6	+8	+10	+12	+14	

7. (3)
- 5, 3, 10, 8, 17, 15, 26, 24
- 2 +7 -2 +9 -2 +11 -2
- +2 +2

8. (4)
- 97, 77, 59, 43, 29, 17
- 20 -18 -16 -14 -12

9. (1)

I ✓
II ×

I ✓
II ×

10. (3)

11. (2)

12. (3)

13. (1)

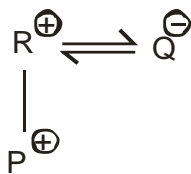
14. (2)

15. (Bonus) Required percentage = $\frac{11}{500} \times 100 = 2.2\%$ (Bonus)

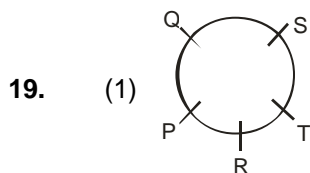
16. (2) All are countries and kabul is city

17. (3)

18. (1) P + R - Q



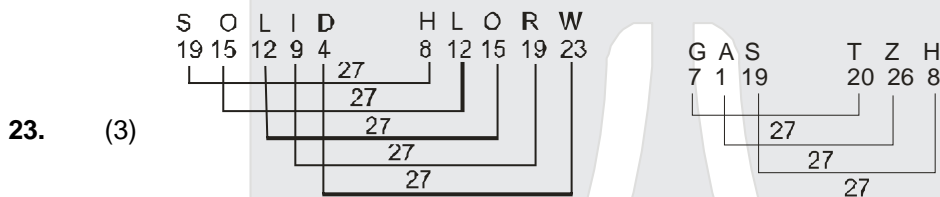
Q is father of P.



20. (3) $27 > 81 \ \$ \ 9 < 6$
 $= 27 + 81 \div 9 - 9$
 $= 27 + 9 - 6 = 36 - 6 = 30$

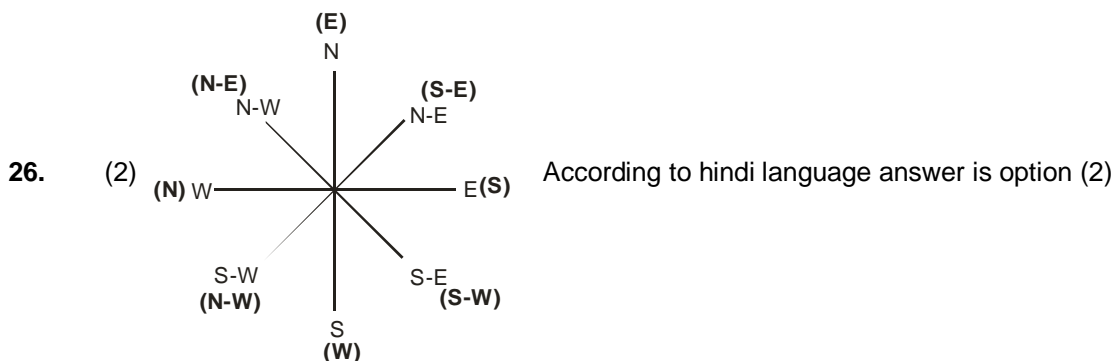
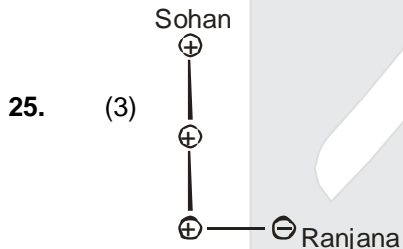
21. (1)
 $6 - 2 - 3$ $6 - 1$
 $6 - 5 - 4$

22. (2)



24. (4) $I = 9$ $G \ I \ R \ L$ $7 + 9 + 18 + 12 = 46$
 ↓ ↓ ↓ ↓
 7 9 18 12

BOY = $2 + 15 + 25 = 42$



27. (4) $\boxed{6 \ 4} \ 1 \ 2 \ 2 \ 8 \ 7 \ \boxed{4 \ 2} \ \boxed{7 \ 5 \ 3} \ \boxed{8 \ 6} \ 2 \ 1 \ 7 \ 0 \ 4 \ \boxed{1 \ 3} \ 2 \ \boxed{8 \ 6}$

28. (3)

29. (2)

	5	
16	109	2
	6	

 $(5 - 2)^2 = 9$
 $(16 - 6)^2 = 100$

	21	
22	53	19
	15	

 $(21 - 19)^2 = 4$
 $(22 - 15)^2 = 49$

$\Rightarrow 100 + 9 = 109$ $\Rightarrow 49 + 4 = 53$

	51	
17	?	48
	13	

 $(51 - 48)^2 = 9$
 $(17 - 13)^2 = 16$

$\Rightarrow 16 + 9 = 25$ Ans

30. (2)

31. (4) In alternate figure side is decreased

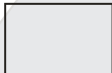
because (A) → hexagon (C) → Pentagon (E) → Will be quadrilateral

32. (3)

33. (1)

Move anticlockwise direction with 45° and colour will be same in alternate figure.

34. (4)

\square is rotate in clockwise direction by $\frac{1}{2}$ while \triangle is rotate in anticlock wise direction $\frac{1}{2}$ then 1 then 1 and $\frac{1}{2}$ distance so answer is 

35. (4) Mirror image of U is same as the figure.



36. (3)

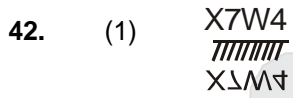
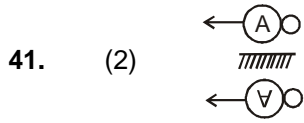
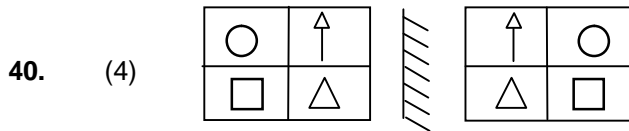
In options (1), (2) & (4) Inner arrow is in anticlockwise direction & outer arrow is in clockwise direction while in option (3) inner arrow is in clockwise direction & outer arrow is in anticlockwise direction.

37. (1)

38. (4)

In all options, dark sides are opposite except option (4)

39. (2) STOP  



43. (3)

44. (2)

45. (3)

46. (4)

47. (1)

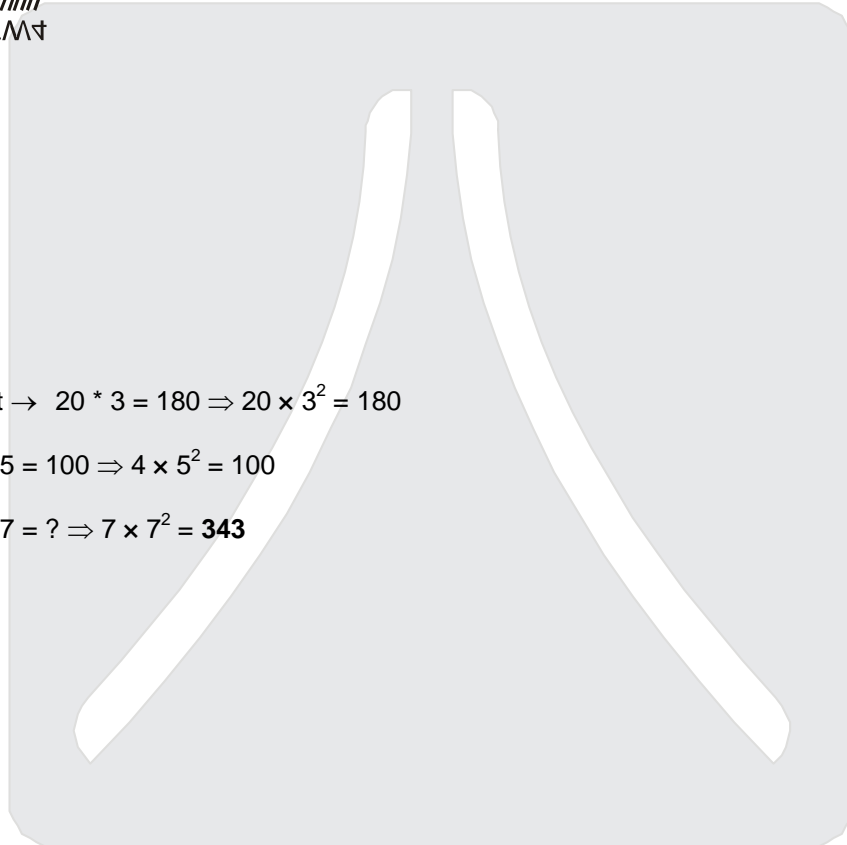
48. (3) Hint → $20 * 3 = 180 \Rightarrow 20 \times 3^2 = 180$

$$4 * 5 = 100 \Rightarrow 4 \times 5^2 = 100$$

$$7 * 7 = ? \Rightarrow 7 \times 7^2 = \mathbf{343}$$

49. (1)

50. (3)



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