



# MENTAL MATHS COMPETITION

: Organised by :

**GLOBAL MATHS SCIENCE EDUCATION®**

*in association with*

**Math Vision PTE Ltd., Singapore**

## MOCK TEST

Name : \_\_\_\_\_

School : \_\_\_\_\_ Std. : **5**

Mob.No. : (Mother) \_\_\_\_\_ (Father) \_\_\_\_\_

### **Instructions for the Competition**

**Total Marks : 200**


**Total No of questions: 75**

1. Time :  $1\frac{1}{2}$ hr
2. Students can use HB Pencil for marking answers in OMR sheet.
3. Questions are arranged according to 3 difficulty level to provide pupils with optimum exposure to Mental Maths.
4. [Section 1] In this section, there are 40 questions help to build calculation skills. Each question carries 2 marks.
5. [Section 2] It is related with 20 questions to test fundamental concept covered with topics listed. Each question carries 3 marks.
6. [Section 3] Here questions are challenging & required high order thinking skills. Each question carries 4 marks. Students are requested to practice extra question given alongwith the Mock paper. Any 15 questions can be asked from given question format in mock paper & extra practice questions.

# MENTAL MATHS COMPETITION

## Topics Included.

- (1) Q. No. 1 to 40 are based on basic. Calculation questions related to (+, -, ×, ÷), doubling, halving and square of a number from 2 to 30.
- (2) Student should know multiplication tables from 2 to 25.
- (3) 3 digit, 4 digit Nos. operation. [+ , - , × , ÷]
- (4) Number bonds, prime numbers from 1 to 100, unitary methods.
- (5) Mixed operations ( ÷ , ×, + , - )
- (6) Calculating H.C.F & L.C. M
- (7) Number series (WHAT COMES NEXT)
- (8) Roman Numbers (FROM 1 to 1000) , divisibility property of 2, 3, 4, 6, 9, 10.
- (9) Fractions :- Addition, subtraction, multiplication, divisions, comparision.
- (10) Conversion from hrs to mins, years to months, weeks to days.
- (11) Perimeter and area of square, rectangle & given close figure.
- (12) Word problems related to addition, subtraction, multiplication, division.



**Practice Books  
are available at our  
Registration Centres only  
(Std.1 to 7)**

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**GLOBAL KNOWLEDGE  
PUBLICATIONS**



## SECTION 1 (Mental Maths Calculation)

**1.**  $51612 + 91341 = \underline{\hspace{2cm}}$

- (a) 122853                      (b) 132953  
(c) 142953                      (d) 152853

**2.**  $91243 - 9824 = \underline{\hspace{2cm}}$

- (a) 81419                      (b) 71319  
(c) 61428                      (d) 82319

**3.**  $85123 + 948 = \underline{\hspace{2cm}}$

- (a) 84071                      (b) 86071  
(c) 76051                      (d) 85071

**4.**  $24863 - 3126 = \underline{\hspace{2cm}}$

- (a) 21747                      (b) 31437  
(c) 11747                      (d) 21737

**5.**  $9132 + 4136 - 400 = \underline{\hspace{2cm}}$

- (a) 13868                      (b) 13568  
(c) 12868                      (d) 12888

**6.**  $2248 + 2000 - 600 = \underline{\hspace{2cm}}$

- (a) 2618                      (b) 3648  
(c) 3638                      (d) 5648

**7.**  $2461 - (300 + 800) = \underline{\hspace{2cm}}$

- (a) 1261                      (b) 3561  
(c) 1361                      (d) 3661

**8.**  $(100 - 36) + (100 - 25) =$

- $\underline{\hspace{2cm}}$   
(a) 159                      (b) 139  
(c) 169                      (d) 149

**9.**  $(100 - 72) + (100 + 22) =$

- $\underline{\hspace{2cm}}$   
(a) 250                      (b) 150  
(c) 350                      (d) 450

**10.** 
$$\begin{array}{r} 2243 \\ + 1319 \\ + 1243 \\ + 1251 \\ + \underline{3123} \\ \hline \end{array}$$

- (a) 9173                      (b) 8174  
(c) 9274                      (d) 9179

**11.** 
$$\begin{array}{r} 4123 \\ + 1359 \\ + 1628 \\ + 1358 \\ + \underline{3123} \\ \hline \end{array}$$

- (a) 11591                      (b) 12581  
(c) 11661                      (d) 11582

**12.**  $(9 + 8 + 3 + 4 + 8 + 3) + \square$

- $= 40$   
(a) 8                      (b) 5  
(c) 7                      (d) 10

**13.**  $(8 + 3 + 2 + 3 + 2) + \square = 25$

- (a) 10                      (b) 6  
(c) 12                      (d) 7

- 14.**  $27 \times 24 =$  \_\_\_\_\_  
(a) 648 (b) 442  
(c) 637 (d) 658
- 15.**  $95 \times 97 =$  \_\_\_\_\_  
(a) 9426 (b) 9285  
(c) 9215 (d) 9556
- 16.**  $4134 \times 40 =$  \_\_\_\_\_  
(a) 165360 (b) 155340  
(c) 485260 (d) 154340
- 17.**  $3503 \times 50 =$  \_\_\_\_\_  
(a) 144250 (b) 164250  
(c) 132350 (d) 175150
- 18.**  $8254 \times 60 =$  \_\_\_\_\_  
(a) 483260 (b) 495240  
(c) 411250 (d) 412560
- 19.**  $450 \div 50 =$  \_\_\_\_\_  
(a) 1 (b) 4  
(c) 9 (d) 5
- 20.**  $600 \div 25 =$  \_\_\_\_\_  
(a) 23 (b) 24  
(c) 22 (d) 21
- 21.**  $1940 \div 4 =$  \_\_\_\_\_  
(a) 485 (b) 235  
(c) 158 (d) 135

- 22.**  $2727 \div 9 =$  \_\_\_\_\_  
(a) 303 (b) 33  
(c) 903 (d) 301
- 23.** If 1936 is divided by 3,  
leaves remainder as \_\_\_\_\_  
(a) 4 (b) 1  
(c) 3 (d) 8
- 24.** If 4338 is divided by 5,  
leaves remainder \_\_\_\_\_  
(a) 4 (b) 3  
(c) 6 (d) 6
- 25.** double of 593 is \_\_\_\_\_  
(a) 1186 (b) 1886  
(c) 2186 (d) 1086
- 26.** half of 672 is \_\_\_\_\_  
(a) 436 (b) 336  
(c) 136 (d) 116
- 27.** Square of 23 is \_\_\_\_\_  
(a) 429 (b) 529  
(c) 328 (d) 528
- 28.** Square of 29 is \_\_\_\_\_  
(a) 741 (b) 461  
(c) 841 (d) 361
- 29.**  $9 \times 30 + \square = 400$   
(a) 140 (b) 130  
(c) 120 (d) none of this

- 30.**  $7 \times 60 - \square = 380$   
(a) 20 (b) 30  
(c) 40 (d) 50
- 31.** 7 times of 9 – square of 7 =  
(a) 13 (b) 15  
(c) 12 (d) 14
- 32.** 4 times of 8 – square of 4 =  
(a) 8 (b) 16  
(c) 24 (d) 0
- 33.** 3 times of 9 – square of 2 =  
(a) 31 (b) 27  
(c) 24 (d) 23
- 34.** 5 times of 8 – square of 1 =  
(a) 38 (b) 42  
(c) 39 (d) 41
- 35.**  $(96 \times 100) - (37 \times 10) =$   
(a) 9230 (b) 9970  
(c) 8230 (d) 9320
- 36.**  $(56 \times 50) - (35 \times 12) =$   
(a) 3220 (b) 1900  
(c) 220 (d) 2380
- 37.**  $(25 \times 100) - (12 \times 10) =$   
(a) 130 (b) 1300  
(c) 2390 (d) 2380

- 38.**  $(95 \times 10) + (12 \times 100) =$   
(a) 2150 (b) 10500  
(c) 1250 (d) 10800
- 39.** Twelve times of 6 reduced by 2 times of 8 we get \_\_\_\_\_  
(a) 56 (b) 66  
(c) 76 (d) 86
- 40.** Five times of 8 increased by 4 times of 5 we get \_\_\_\_\_  
(a) 100 (b) 20  
(c) 50 (d) 60

## SECTION 2 (Mental Maths Concepts)

**41.** A 4 digit even number is more than 3500 but less than 4000. Find the sum of the smallest and greatest possible number.

- (a) 7500                      (b) 7504  
(c) 7998                      (d) 7990

**42.** W is 30 tens more than V. V is 10 hundred less than 7230, find the value of W.

- (a) 6530                      (b) 6930  
(c) 7930                      (d) 8530

**43.** Find smallest fraction among

(i)  $\left(\frac{1}{4} + \frac{5}{4}\right)$                       (ii)  $\left(\frac{11}{4} - \frac{3}{4}\right)$

(iii)  $\left(\frac{9}{4} + \frac{1}{4}\right)$                       (iv)  $\left(\frac{7}{2} - \frac{2}{4}\right)$

- (a) i                                      (b) ii  
(c) iii                                      (d) iv

**44.**  $5 \overline{)5050}$

- (a) 1010                      (b) 101  
(c) 101                      (d) 1001

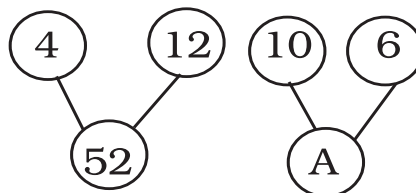
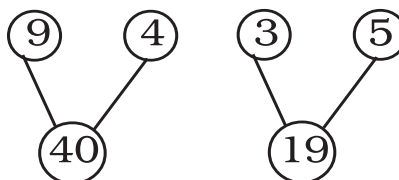
**45.**  $50 - (\square \times 5) = 0$

- (a) 5                                      (b) 10  
(c) 50                                      (d) 0

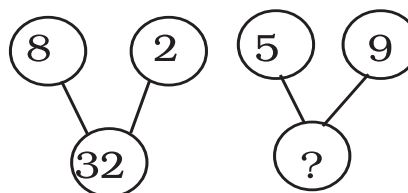
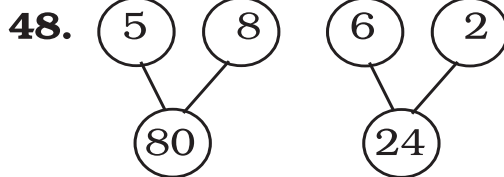
**46.** A machine produces 90 pieces of good is 1 hour? How many pieces it will produce is 20 mins?

- (a) 15                      (b) 30  
(c) 10                      (d) 20

**47.** Observe the number bond and find the value of A.



- (a) 56                      (b) 64  
(c) 42                      (d) 65



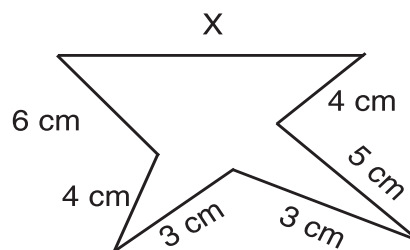
- (a) 90                      (b) 80  
(c) 60                      (d) 28

**49.**  $P + Q = 6$   
 $P - Q = 2$                       Then P = ?

- (a) 2                      (b) 5  
(c) 8                      (d) 4

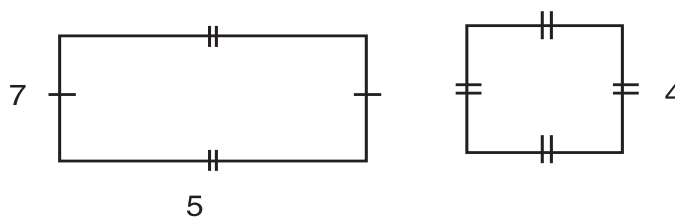
- 50.** The sum of prime numbers between  $\boxed{35}$  and  $\boxed{45}$  is \_\_\_\_\_  
 (a) 84 (b) 160  
 (c) 80 (d) 121
- 51.** There are \_\_\_\_\_ prime number between 23 and 40.  
 (a) 2 (b) 3  
 (c) 4 (d) 5
- 52.** The sum of all divisor of 24 is \_\_\_\_\_  
 (a) 58 (b) 59  
 (c) 52 (d) 60
- 53.** L.C.M. of 12 and 9 is \_\_\_\_\_  
 (a) 12 (b) 9  
 (c) 36 (d) 108
- 54.** H.C.F. of 15 and 12 is \_\_\_\_\_  
 (a) 3 (b) 5  
 (c) 12 (d) 15
- 55.** The sum of 9<sup>th</sup> odd number and 15<sup>th</sup> even number is \_\_\_\_\_  
 (a) 48 (b) 47  
 (c) 49 (d) 50
- 56.** If 15<sup>th</sup> Feb 2002 is Friday then the day on 24<sup>th</sup> March 2002 is \_\_\_\_\_  
 (a) Monday (b) Saturday  
 (c) Sunday (d) Friday

**57.**



- If perimeter of given figure is 33 cm find value of x.  
 (a) 7 (b) 8  
 (c) 9 (d) 10

**58.**



- The difference between area of rectangle & square is \_\_\_\_\_ sq unit.  
 (a) 29 (b) 30  
 (c) 28 (d) 19

**59.**

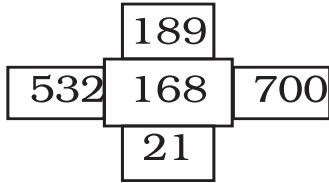
- Subtract 49 tens from 57 hundreds. The place value of the digits 2 in the result is \_\_\_\_\_  
 (a) 2 units (b) 2 tens  
 (c) 2 hundreds (d) 2 thousand

**60.**

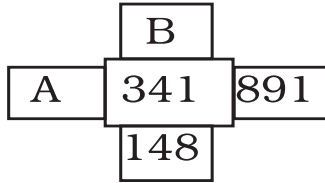
- The product of 2 and 4 gives the same results as \_\_\_\_\_ divided by 3.  
 (a)  $3 + 18$  (b)  $7 + 15$   
 (c)  $11 + 12$  (d)  $18 + 6$

**SECTION 3 (Mental Maths Challenge)**

**61.** Study the number pattern in diagram.



*Diagram 1*



*Diagram 2*

The difference between value of A and B is \_\_\_\_\_

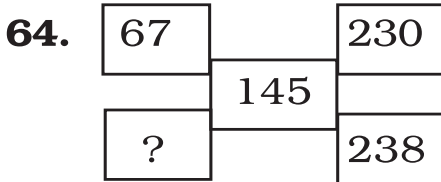
- (a) 1039                      (b) 544                      (c) 61                      (d) 101

**62.** The total age of Anil and Manali is 37 years. Manali is 9 years younger than Anil. How old was Anil five years ago?

- (a) 20 yrs                      (b) 16 yrs                      (c) 18 yrs                      (d) 15 yrs

**63.** The sum of two facing pages of a book where John stopped reading is 71. If there are 200 pages in the book, how many pages does John need to read in order to finish reading the book.

- (a) 186                      (b) 190                      (c) 164                      (d) 193



If the sum of the numbers in each diagonal is equal. Find the missing number in box?

- (a) 75                      (b) 65                      (c) 85                      (d) 55

**65.**  $453 - \blacklozenge = 321 + \blacklozenge$

What can  $\blacklozenge$  be?

- (a) 66                      (b) 132                      (c) 152                      (d) 387



66.  $21 \square 5 \square 3 \square 2 = 10$

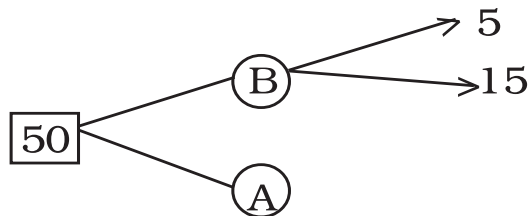
Put proper sign out of ( + , - , × , ÷ ) to get required answer.

- (a) + - ×                      (b) - + ×                      (c) × ÷ +                      (d) - - ×

67. \_\_\_\_\_ less than 81 tens 42 ones is 632

- (a) 18 tens 40 ones                      (b) 200 tens 20 ones  
 (c) 50 tens 9 ones                      (d) 69 tens 65 ones

68. Complete the number Bonds, find the difference between A and B.



- (a) 50                      (b) 20                      (c) 10                      (d) 15

69.  $X + Y = 13$

$X + X + Y = 23$

The value of y is \_\_\_\_\_

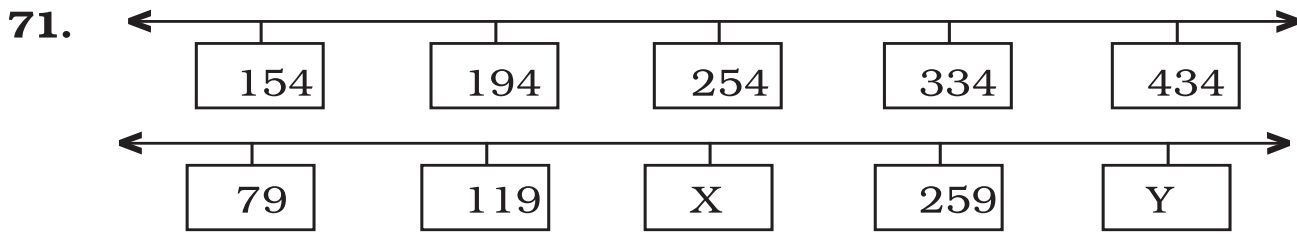
- (a) 14                      (b) 3                      (c) 9                      (d) 10

70. Sonika separated 36 index cards by colours into four groups as follows:-

- ❖ 6 of them were blue
- ❖  $\frac{1}{3}$  of index cards are yellow.
- ❖ 25% of the index cards were green.
- ❖  $\frac{1}{4}$  of the index cards were pink.

Which colour group contained the greatest number of cards.

- (a) Blue                      (b) Green                      (c) Yellow                      (d) Pink



The sum of X and Y is \_\_\_\_\_

- (a) 528                      (b) 538                      (c) 527                      (d) 539

72. There are 568 apples and oranges in a box. There are 40 more apples than oranges. 15 oranges are rotten. How many more apples than fresh oranges are there in the box.

- (a) 50                      (b) 52                      (c) 55                      (d) 24

73. Amita has 112 pink ribbons and some white and blue ribbon. There are 23 fewer pink ribbons than white ribbons and 89 more blue ribbons than pink ribbons. How many ribbons does Amita have altogether?

- (a) 448                      (b) 438                      (c) 428                      (d) 468

74. The height of the taller tree is thrice the height of shorter tree. The height of shorter tree is 2 m. Find the sum of height of both the trees?

- (a) 6m                      (b) 8 m                      (c) 7 m                      (d) 9 m

75. List all possible numbers that are between 20 and 60 and have sum of 9 when all the digits are added, the sum of all these numbers is \_\_\_\_\_

- (a) 162                      (b) 163                      (c) 161                      (d) 166

\*\*\*



6. If  $N$  is the greatest 2 digit prime number then  $(N - 2) \times 2$  gives
- \_\_\_\_\_
- (a) 190                      (b) 180                      (c) 170                      (d) 160
7. Harshit chose a certain number, then he subtracted 20 from it then he added 50 to that difference. His final result was 209. What number did Harshit choose at the beginning.
- (a) 279                      (b) 169                      (c) 179                      (d) 268
8. A farmer built a fence around his square plot. He used 27 fence pots on each side of a square. How many pots did he need altogether?
- (a) 100                      (b) 104                      (c) 106                      (d) 108
9. A boy is 2 yrs 5 months old. His sister Anu is 2 years 10 months elder to him. How old is Anu.
- (a) 4 yrs 10 months                      (b) 5 years 3 months  
(c) 5 yrs 5 months                      (d) 5 years 10 months
10. Look at this schedule of interview times. If the pattern continues, what is the time of 6th interview.

<b>Interview</b>	<b>Time</b>
1st	1:00
2nd	1:40
3rd	2:20
4th	3:00

- (a) 3: 20                      (b) 3:40                      (c) 4:20                      (d) 4:40

- 11.** A store has sale on cans of tennis balls. For every 2 cans bought you get 1 can free. When you came home you had 18 balls in your shopping bag. If each can has 3 balls. How many tennis balls did you get free?  
(a) 9                      (b) 8                      (c) 7                      (d) 6
- 12.** Mimi took part in an exercise programme. She run for 420 seconds , walked for half an hour and swam for 45 minutes. For how many minutes she has finished an exercise programme?  
(a) 71                      (b) 75                      (c) 82                      (d) 81
- 13.** Brian ate 4 slice of large size pizza and his father ate 6 slice of it. If his brother ate  $\frac{1}{2}$  of the pizza remaining and there were still 3 slices left. How many slices of pizza were there as first?  
(a) 12                      (b) 14                      (c) 16                      (d) 24
- 14.** A stapler and a book cost ₹ 95. Sandy bought 3 book for ₹ 51. How much did the stapler cost?  
(a) ₹ 51                      (b) ₹ 78                      (c) ₹ 68                      (d) ₹ 88
- 15.** Rakesh made three times paper boats as Nagesh. Nagesh made twice as many paper boats as Yogesh. If Nagesh made 28 paper boats. How many paper boats did the three children make altogether?  
(a) 126                      (b) 136                      (c) 116                      (d) 98

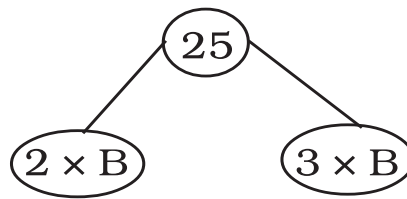
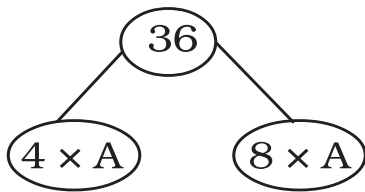
**16.** Johny is 12 years old. His cousin Sam is 16 years older than him. Find their total age in 10 years time.

- (a) 50 yrs                      (b) 60 yrs                      (c) 40 yrs                      (d) 38 yrs

**17.** Which of the following comparison is not correct?

- (a)  $21 = XXI$                       (b)  $XL > XXXIX$   
 (c)  $CCXXI < CCIX$                       (d)  $CCXXI > CCXIX$

**18.**



then  $A + B = ?$

- (a) 5                      (b) 6                      (c) 7                      (d) 8

**19.** M and  $\frac{3}{12}$  makes 1 whole when M is subtracted from  $\frac{11}{12}$ , N is obtained what is the sum of M and N?

- (a)  $\frac{10}{12}$                       (b)  $\frac{11}{12}$                       (c)  $\frac{3}{12}$                       (d)  $\frac{4}{12}$

**20.**

$$\begin{array}{rcl} \Delta & + 12 & = 21 \\ \square & + \Delta & = 16 \\ \Delta & - \square & = ? \end{array}$$

- (a) 2                      (b) 3                      (c) 5                      (d) 9

- 21.** What will be 6th term of sequence below.  
80, 40, 20, 10, 5, .....
- (a) 1                                      (b) 5                                      (c)  $1\frac{1}{4}$                                       (d)  $2\frac{1}{2}$
- 22.** Nalini ate 28 french fries at lunch. Monty ate half as many french fries as Nalini. Arpit ate 3 more french fries than Monty. Which number sentence given below will find the number of french fries Arpit ate?
- (a)  $(28 - 3) \div 2$                       (b)  $(28 + 3) \div 2$                       (c)  $(28 \div 2) - 3$                       (d)  $(28 \div 2) + 3$
- 23.** It takes 55 minutes of fly from town A to town B. It takes 12 times as much time to drive the same distance. How much time is needed to drive from town A to town B?
- (a) 11 hrs                                      (b) 6 hrs 6 min                                      (c)  $6\frac{1}{2}$  hour                                      (d) 9 hrs
- 24.** If  $L = 3$ ,  $M = L + 2$ ,  $N = L - 3$                                       Use DMAS  
Then  $L + M \times N = ?$
- (a) 5                                      (b) 3                                      (c) 0                                      (d) 1
- 25.** If  $\square + \square + \square + \square = 120$   
and  $\square \div \Delta = 6$   
find  $\Delta + \square = ?$
- (a) 25                                      (b) 35                                      (c) 30                                      (d) None of this

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For any query related to question paper format, Kindly send email to us at [mmcgmse@gmail.com](mailto:mmcgmse@gmail.com) . We will be replying with in 24 hours.

## Answer Sheet

1	c
2	a
3	b
4	d
5	c
6	b
7	c
8	b
9	b
10	d
11	a
12	b
13	d
14	a
15	c
16	a
17	d
18	b
19	c
20	b
21	a
22	a
23	b
24	b
25	a

26	b
27	b
28	c
29	b
30	c
31	d
32	b
33	d
34	c
35	a
36	d
37	d
38	a
39	a
40	d
41	a
42	a
43	a
44	a
45	b
46	b
47	b
48	a
49	d
50	d

51	b
52	d
53	c
54	a
55	b
56	c
57	b
58	d
59	c
60	d
61	c
62	c
63	c
64	a
65	a
66	d
67	a
68	c
69	b
70	c
71	b
72	c
73	a
74	b
75	a

## Answers for extra practice questions

1	c
2	c
3	a
4	c
5	c
6	a
7	c
8	b

9	b
10	c
11	d
12	c
13	c
14	b
15	a
16	b

17	d
18	d
19	b
20	a
21	d
22	d
23	a
24	b
25	b



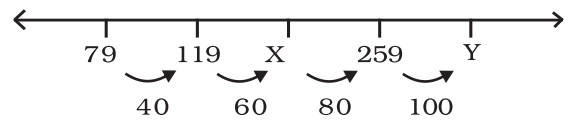
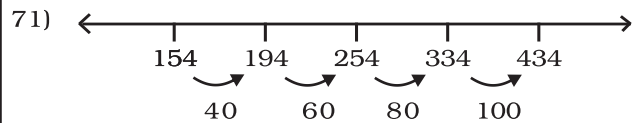
## Section 3 (Solution)

- 61) In diagram 1,  
 $532 + 168 = 700$  and  
 $21 + 168 = 189$   
 Hence in diagram 2,  
 $A + 341 = 891$   
 $\therefore A = 891 - 341$   
 $= 550$   
 $148 + 341 = B$   
 $\therefore B = 459$   
 Difference between A & B  
 $= 550 - 459$   
 $= 91$
- 62) Anil = Manali + 9  
 Anil + Manali = 37  
 $\downarrow$   
 $\boxed{\text{Manali} + 9} + \text{Manali} = 37$   
 twice the age of Manali =  $37 - 9$   
 $= 28$   
 $\therefore$  Age of Manali = 14 years  
 $\therefore$  Age of Anil = 14 + 9  
 $= 23$  years.  
 5 yrs. ago Anil's age =  $23 - 5$   
 $= 18$
- 63) Page numbers are consecutive  
 $6 + 7 = 13$   
 Hence John stopped at page no. 7  
 $\therefore$  Remaining pages =  $200 - 7$   
 $= 193$
- 64) 145 is common for both diagonals  
 Hence  $67 + 238 = ? + 230$   
 Hence ? =  $67 + 238 - 230$   
 $= 75$
- 65)  $453 - \diamond = 321 + \diamond$   
 $\therefore 453 - 321 = \diamond + \diamond$   
 $132 = \diamond + \diamond$   
 $\diamond = \frac{132}{2}$   
 $= 66$
- 66)  $21 - 5 - 3 \times 2$   
 As per BODMAS  
 $= 21 - 5 - 6$   
 $= 16 - 6$   
 $= 10$   
 Hence option (d) -- X is the correct answer.
- 67) 81 tens 42 ones  
 $= 81 \times 10 + 42 \times 1$   
 $= 810 + 42$   
 $= 852$   
 $852 - 632 = 220$   
 $220 = 20 \text{ tens} + 20 \text{ ones}$
- 68)  $B = 5 + 15 = 20$   
 $A + 20 = 50$   
 $A = 50 - 20$   
 $A = 30$

$$\begin{aligned} \text{Difference between A and B} &= 30 - 20 \\ &= 10 \end{aligned}$$

69)  $\frac{X + Y}{X + \frac{X + Y}{2}} = 13$   
 $X + \frac{X + Y}{2} = 23$   
 $\downarrow$   
 $X + 13 = 23$   
 $X = 23 - 13$   
 $X = 10$   
 $\therefore 10 + Y = 13$   
 $Y = 13 - 10$   
 $Y = 3$

- 70) Blue = 6  
 Yellow =  $\frac{1}{3} \times 36 = 12$   
 Green =  $\frac{25}{100} \times 36 = 9$   
 Pink =  $\frac{1}{4} \times 36 = 9$   
 Greatest no. of cards = Yellow.



$$\begin{aligned} X &= 119 + 60 = 179 \\ Y &= 259 + 100 = 359 \\ X + Y &= 179 + 359 \\ &= 538 \end{aligned}$$

- 72) Oranges = 36  
 Apples =  $(2 \times 36) + 10$   
 $= 72 + 10$   
 $= 82$   
 Total no. of fruits =  $36 + 82$   
 $= 118$
- 73) Pink  $\rightarrow 112$   
 White  $112 + 23 = 135$   
 Blue  $112 + 89 = 201$   
 Total no. of ribbons =  $112 + 135 + 201$   
 $= 448$
- 74) Shorter tree = 2m  
 taller tree  $3 \times 2 = 6\text{m}$   
 Sum of heights =  $2 + 6 = 8\text{m}$
- 75) Possible numbers between 20 and 60 having sum of digits as 9 are  
 27, 36, 45, 54  
 Their sum =  $27 + 36 + 45 + 54$   
 $= 162$

## Extra Practice Questions (Solution)

- 1)  $x + y^2 = 250$   
 $y = 15$   
 $y^2 = 15^2 = 225$   
 $x + 225 = 250$   
 $x = 250 - 225$   
 $x = 25$
- 2)  $\frac{1}{3}$  part was given to Neha  
 Hence Neha got 1 part out of 3.  
 Hence, Juhi got 2 parts out of 3  
 But Juhi got ₹ 250  
 $\therefore$  2 parts = 250  
 $\therefore$  1 part =  $250 \div 2 = 125$   
 $\therefore$  Neha got ₹ = 125
- 3)
- |   |   |   |   |  |   |   |   |   |   |
|---|---|---|---|--|---|---|---|---|---|
| 2 | A | 8 | 4 |  | 2 | 0 | 8 | 4 |   |
| + | 3 | 6 | B |  | + | 3 | 6 | 6 | 7 |
| + | 1 | 2 | 3 |  | + | 1 | 2 | 3 | 9 |
| D | 9 | 9 | 0 |  | 6 | 9 | 9 | 0 |   |
- A = 0, B = 6, C = 9, D = 6  
 B & D = 6
- 4)  $17 \times 7 - 6 \times 17 + 18 \times 12 - 3 \times 17$   
 $= 119 - 102 + 216 - 51$   
 $= 182$
- 5) According to 2nd diagram  
 $\bigcirc = 205 - 180 = 25$   
 According to 1st diagram
- $$6 \times 25 + \square = 330$$
- $$150 + \square = 330$$
- $$\square = 330 - 150$$
- $$= 180$$
- 6) N is the greatest 2 digit prime number  
 $\therefore N = 97$   
 $(N - 2) \times 2 = (97 - 2) \times 2$   
 $= 95 \times 2$   
 $= 190$
- 7) Number  $\xrightarrow{-20}$   $\xrightarrow{+50}$  209  
 Now work backwards,  
 $209 - 50 = 159$   
 $159 + 20 = 179$   
 $\therefore$  Number in beginning = 179
- 8) If we exclude 4 corner pots then, there are 25 pots in side of the square.  
 Hence total no. of pots  
 $= (25 \times 4) + 4$   
 $= 100 + 4$   
 $= 104$

- 9) Boy  $\rightarrow$  2 yrs. 5 months  
 Anu  $\rightarrow$  2 yrs. 5 months  
 $\quad + 2$  yrs. 10 months  
 $\hline$   
 $\quad 4$  yrs. 15 months  
 $= 5$  yrs. 3 months.
- 10) There is a difference of 40 minutes between two successive interviews.  
 Hence 5<sup>th</sup> Interviews will be at 3 : 40 and  
 6<sup>th</sup> Interviews will be at 4 : 20.
- 11) 18 balls =  $18 \div 3$   
 $= 6$  cans.  
 6 cans = 2 cans + 1 free can  
 $\quad + 2$  cans + 1 free can  
 Hence total free cans = 2  
 $\therefore$  No. of free balls =  $2 \times 3 = 6$
- 12) Run  $\rightarrow$  420 seconds  
 $= 420 \div 60$   
 $= 7$  minutes  
 Walk  $\rightarrow$  half an hour  
 $= \frac{1}{2} \times 60$   
 $= 30$  minutes  
 Swim  $\rightarrow$  45 minutes  
 Total time =  $7 + 30 + 45$   
 $= 82$  minutes
- 13) Remaining slices = 3  
 $\therefore$  Brian's brother ate 3 slices. His father ate 6 and Brian ate 4.  
 Hence, total no. of slices =  $3 + 3 + 6 + 4 = 16$
- 14)
- |                |               |
|----------------|---------------|
| 3 books        | = ₹ 51        |
| 1 book         | = $51 \div 3$ |
|                | = 17          |
| stapler + book | = ₹ 95        |
| stapler        | = $95 - 17$   |
|                | = 78          |
- 15) Nagesh  $\rightarrow$  28  
 Rakesh  $\rightarrow 3 \times 28 = 84$   
 Yogesh  $\rightarrow 28 \div 2 = 14$   
 Total paper boats =  $28 + 84 + 14$   
 $= 126$
- 16) Present age of Johny = 12  
 Present age of Sam =  $12 + 16$   
 $= 28$   
 After 10 yrs,  
 Johny's age =  $12 + 10 = 22$   
 Sam's age =  $28 + 10 = 38$   
 Total age after 10 yrs =  $22 + 38$   
 $= 60$
- 17) CCXXI = 221  
 CCIX = 209  
 Hence CCXXI < CCIX is incorrect.

18) For 1<sup>st</sup> figure  
 $4 + 8 = 12$  and  $12 \times 3 = 36$   
 $\therefore A = 3$   
 for 2<sup>nd</sup> figure  
 $2 + 3 = 5$  and  $5 \times 5 = 25$   
 $\therefore B = 5$   
 $A + B = 3 + 5 = 8.$

19)  $M + \frac{3}{12} = 1$   
 $\therefore M = 1 - \frac{3}{12}$   
 $= \frac{12}{12} - \frac{3}{12}$   
 $= \frac{9}{12}$

$N = \frac{11}{12} - M$   
 $= \frac{11}{12} - \frac{9}{12}$   
 $= \frac{2}{12}$

$M + N = \frac{9}{12} + \frac{2}{12} = \frac{11}{12}$

20)  $\triangle + 12 = 21$   
 $\triangle = 21 - 12 = 9$   
 $\square + \triangle = 16$   
 $\square + 9 = 16$   
 $\square = 16 - 9 = 7$   
 $\triangle - \square = 9 - 7 = 2$

21)  $80 \div 2 = 40$  (2<sup>nd</sup>)  
 $40 \div 2 = 20$  (3<sup>rd</sup>)  
 $20 \div 2 = 10$  (4<sup>th</sup>)  
 $10 \div 2 = 5$  (5<sup>th</sup>)  
 $5 \div 2 = \frac{5}{2} = 2\frac{1}{2}$  (6<sup>th</sup>)

22) Nalini  $\rightarrow 28$   
 Monty  $\rightarrow (28 \div 2)$   
 Arpit  $\rightarrow (28 \div 2) + 3$

23) A to B flying  $\rightarrow 55$  min  
 A to B Driving  $\rightarrow 55 \times 12$   
 $= 660$  min  
 $= (660 \div 60)$   
 $= 11$  hours.

24) L = 3  
 M = L + 2 = 3 + 2 = 5

N = L - 3 = 3 - 3 = 0  
 L + M  $\times$  N = 3 + 5  $\times$  0  
 $= 3 + 0$   
 $= 3$

25)  $\square + \square + \square + \square = 120$   
 $\square = 120 \div 4$   
 $= 30$   
 $\square \div \triangle = 6$   
 $30 \div \triangle = 6$   
 $\triangle = 5$   
 $\triangle + \square = 5 + 30$   
 $= 35$

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# MENTAL MATHS COMPETITION®

Date : \_\_\_\_\_

Name of Student in Full (IN CAPITAL LETTERS) :-

Name

Father's Name

Surname

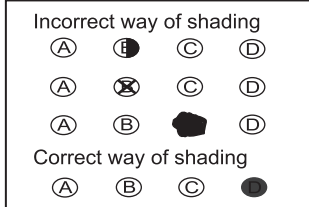
School Name \_\_\_\_\_

Mobile No. \_\_\_\_\_

Std. \_\_\_\_\_ Centre \_\_\_\_\_

Blank box for student information

- INSTRUCTIONS**
1. Use HB Pencil only on this sheet
  2. Darken the ovals fully.
  3. Erase completely to change responses.
  4. Do not make any stray mark on this sheet.



For Office Use Only				
Section			Mark	Marks Scored
1			x 2	
2			x 3	
3			x 4	
Total				
Remark :				

## ANSWERS

Section - I					Section - II					Section - III				
1. (A) (B) (C) (D)	21. (A) (B) (C) (D)	41. (A) (B) (C) (D)	61. (A) (B) (C) (D)											
2. (A) (B) (C) (D)	22. (A) (B) (C) (D)	42. (A) (B) (C) (D)	62. (A) (B) (C) (D)											
3. (A) (B) (C) (D)	23. (A) (B) (C) (D)	43. (A) (B) (C) (D)	63. (A) (B) (C) (D)											
4. (A) (B) (C) (D)	24. (A) (B) (C) (D)	44. (A) (B) (C) (D)	64. (A) (B) (C) (D)											
5. (A) (B) (C) (D)	25. (A) (B) (C) (D)	45. (A) (B) (C) (D)	65. (A) (B) (C) (D)											
6. (A) (B) (C) (D)	26. (A) (B) (C) (D)	46. (A) (B) (C) (D)	66. (A) (B) (C) (D)											
7. (A) (B) (C) (D)	27. (A) (B) (C) (D)	47. (A) (B) (C) (D)	67. (A) (B) (C) (D)											
8. (A) (B) (C) (D)	28. (A) (B) (C) (D)	48. (A) (B) (C) (D)	68. (A) (B) (C) (D)											
9. (A) (B) (C) (D)	29. (A) (B) (C) (D)	49. (A) (B) (C) (D)	69. (A) (B) (C) (D)											
10. (A) (B) (C) (D)	30. (A) (B) (C) (D)	50. (A) (B) (C) (D)	70. (A) (B) (C) (D)											
11. (A) (B) (C) (D)	31. (A) (B) (C) (D)	51. (A) (B) (C) (D)	71. (A) (B) (C) (D)											
12. (A) (B) (C) (D)	32. (A) (B) (C) (D)	52. (A) (B) (C) (D)	72. (A) (B) (C) (D)											
13. (A) (B) (C) (D)	33. (A) (B) (C) (D)	53. (A) (B) (C) (D)	73. (A) (B) (C) (D)											
14. (A) (B) (C) (D)	34. (A) (B) (C) (D)	54. (A) (B) (C) (D)	74. (A) (B) (C) (D)											
15. (A) (B) (C) (D)	35. (A) (B) (C) (D)	55. (A) (B) (C) (D)	75. (A) (B) (C) (D)											
16. (A) (B) (C) (D)	36. (A) (B) (C) (D)	56. (A) (B) (C) (D)												
17. (A) (B) (C) (D)	37. (A) (B) (C) (D)	57. (A) (B) (C) (D)												
18. (A) (B) (C) (D)	38. (A) (B) (C) (D)	58. (A) (B) (C) (D)												
19. (A) (B) (C) (D)	39. (A) (B) (C) (D)	59. (A) (B) (C) (D)												
20. (A) (B) (C) (D)	40. (A) (B) (C) (D)	60. (A) (B) (C) (D)												