



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) _____

Total Marks : 100

Total No.of questions : 50

1. Time : 1 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 20 questions help to build calculation skills. Each question carries 1 mark.
5. [Section 2] It is related with 20 questions to test fundamental concept covered in topic listed below. Each question carries 2 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 given two Mock papers in this booklet. Any 10 questions will be asked from given question format in mock paper & extra practice questions.

Topics

- Addition & Subtraction
- Multiplication & Division. (Tables from 2 to 30)
- Roman Numbers
- Angles (acute, obtuse, right, straight, complete, reflex)
- Complementary & Supplementary angles
- Algebra (Substitution)
- H.C.F & L.C.M
- Area & Perimeter (Square & Rectangle)
- Fractions
- Percentage
- Triangles (Equilateral, Isosceles, Scalene, Angle Property)
- Squares of a number from 2 to 30
- Average
- DMAS (, , x, +, -)

Mock Paper - 1

SECTION - 1

1. $42341 + 79124 =$ _____
 (a) 121365 (b) 120465
 (c) 124165 (d) 121465
2. $91493 - 3807 =$ _____
 (a) 88686 (b) 87686
 (c) 87868 (d) 86686
3. $6148 + 3793 - 729 =$ _____
 (a) 9112 (b) 9122
 (c) 9212 (d) 9012
4. $3541 - (350 + 421) =$ _____
 (a) 2770 (b) 2670
 (c) 2760 (d) 2570
5.
$$\begin{array}{r} 2128 \\ + 3729 \\ + 1028 \\ + 4129 \\ + 1097 \\ \hline \end{array}$$

 (a) 12111 (b) 12011
 (c) 12101 (d) 11211
6. $(9 + 8 + 11 + 13 + 4) + \square = 57$
 (a) 10 (b) 13
 (c) 11 (d) 12
7. $85 \times 24 =$ _____
 (a) 2014 (b) 2140
 (c) 2040 (d) 2400
8. $1680 \div 4 =$ _____
 (a) 402 (b) 420
 (c) 320 (d) 425
9. If 6348 is divided by 12, leaves remainder _____
 (a) 1 (b) 2
 (c) 0 (d) 3
10. $11 \times 25 + \square = 339$
 (a) 64 (b) 54
 (c) 74 (d) 44
11. $125 - (\square \times 9) = 26$
 (a) 9 (b) 12
 (c) 10 (d) 11
12. There are ____ prime numbers between 33 and 59
 (a) 5 (b) 4
 (c) 6 (d) 3
13. The sum of 15th odd number and 19th even number is _____
 (a) 68 (b) 57
 (c) 67 (d) 47
14. Compare : $\frac{9}{15}$ \square $\frac{11}{12}$
 (a) = (b) >
 (c) < (d) None of these



15. Complementary angle of 37°

is _____

- (a) 55° (b) 53°
(c) 43° (d) 143°

16. At 4:30, the angle formed between the two hands of a clock is _____

- (a) obtuse (b) right
(c) acute (d) straight angle

17.  represent 5 ballons, number of  to represent sixty ballons is = _____

- (a) 5 (b) 60
(c) 10 (d) 12

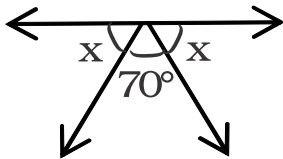
18. Diameter of a circle is 7cm, its radius = _____

- (a) 14 cm (b) 3.5cm
(c) 10.5 cm (d) None

19. $a = 12$, $b = 8$, $c = 9$, find the value of $a + b - c$

- (a) 11 (b) 10
(c) 9 (d) 12

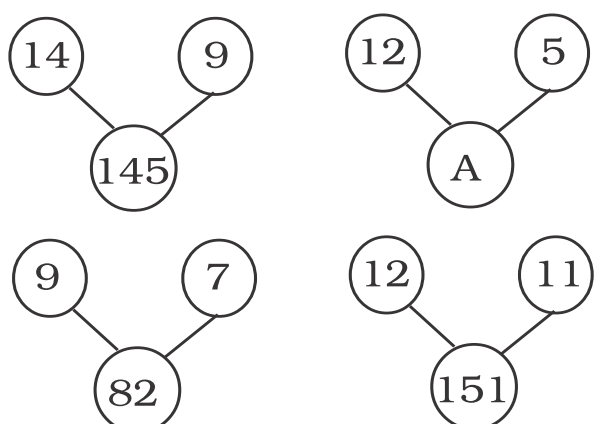
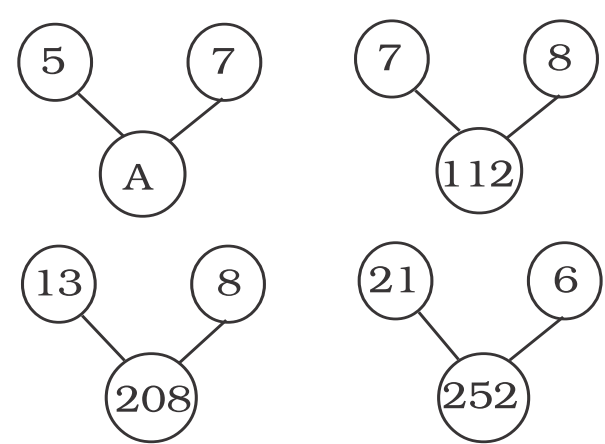
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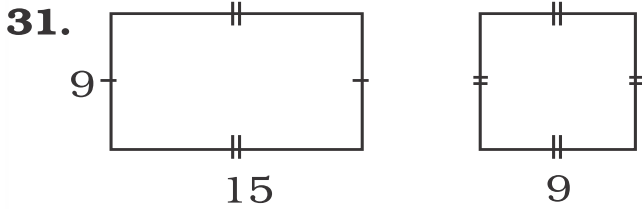


$x =$ _____

- (a) 45° (b) 110°
(c) 55° (d) 65°

SECTION - II

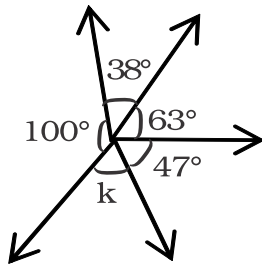
- 21.** Subtract 41 tens from 57 hundreds and 3 ones. The place value of digit 2 in the result is _____
 (a) 2 ones (b) 2 tens
 (c) 2 hundreds (d) 2000
- 22.** A machine produces 360 pieces of goods in 1 hr 30 mins. How many pieces it will produce in 28 mins ?
 (a) 92 (b) 102
 (c) 122 (d) 112
- 23.** The sum of prime numbers between 59 to 79 is _____
 (a) 351 (b) 272
 (c) 262 (d) 282
- 24.** L.C.M of 24 and 36 is _____
 (a) 72 (b) 24
 (c) 48 (d) 62
- 25.** H.C.F of 48 and 56 is _____
 (a) 12 (b) 7
 (c) 10 (d) 8
- 26.** The sum of all divisors of 32 is _____
 (a) 53 (b) 64
 (c) 63 (d) 73
- 27.** If 16th March 2003 is Monday then the day on 25th May 2003 is _____
 (a) Monday (b) Tuesday
 (c) Sunday (d) Wednesday
- 28.** $CXXXII + LXIX - XCVI =$ _____
 (a) 104 (b) 115
 (c) 106 (d) 105
- 29.** Observe the number bond and find the value of 'A'
- 
- (a) 89 (b) 69
 (c) 79 (d) 59
- 30.**
- 
- (a) 35 (b) 70
 (c) 80 (d) 60



The difference between area of rectangle and square is ____ sq unit.

- (a) 54 (b) 44
(c) 55 (d) 64

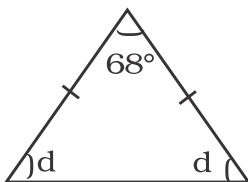
32.



value of $k =$ _____

- (a) 92° (b) 102°
(c) 112° (d) 122°

33.



value of $d =$ _____

- (a) 46° (b) 56°
(c) 58° (d) 36°

34. The value of, $56 - 36 \div 4 + 12 \times 2$ is _____

- (a) 29 (b) 34
(c) 61 (d) 71

35. $\frac{2}{11}$ of 3 yrs 8 months = _____
(a) 4 (b) 8
(c) 22 (d) 44

36. The difference between the complementary and supplementary angle of 70° is _____
(a) 90 (b) 60
(c) 70 (d) 80

37. If $x = 16$ and $y = 12$, value of $2x + 3y =$ _____
(a) 70 (b) 58
(c) 68 (d) 72

38. $5^2 + 12^2 = \square^2$, the number in the \square is _____
(a) 169 (b) 12
(c) 15 (d) 13

39. Length of rectangle = 24m
Breadth of rectangle = 11 m
 \therefore Perimeter = _____
(a) 70m (b) 50m
(c) 68m (d) 72 m

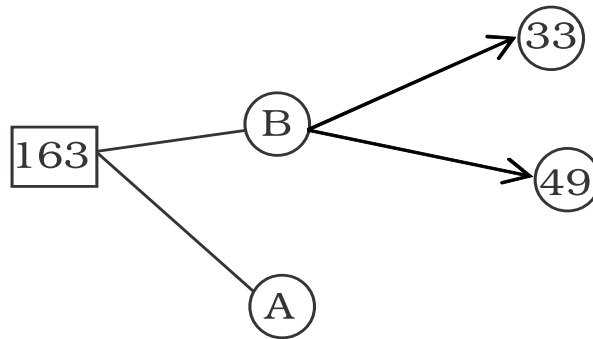
40. $M + N = 96$
 $M - N = 38$, then $M = ?$
(a) 57 (b) 67
(c) 68 (d) 47

SECTION - III

41. The sum of two facing pages of a book where Aamir Stopped reading is 121. If there are 260 pages in the book, how many pages does Aamir need to read in order to finish reading the book.

- (a) 200 (b) 189 (c) 199 (d) 209

42. Complete the number bonds, find the difference between A and B.



- (a) 1 (b) 0 (c) 3 (d) 2

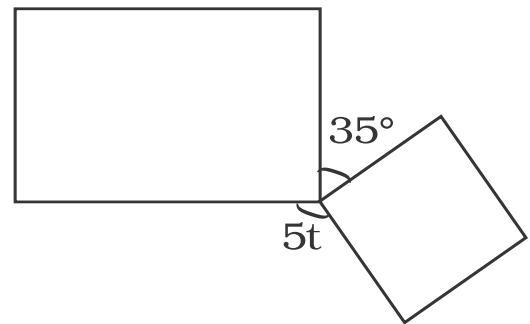
43. $104 - 48 \div 8 \times 2 + 4 = \underline{\hspace{2cm}} + 16$

What is the missing number ?

- (a) 96 (b) 68 (c) 78 (d) 80

44. The adjoining figure shows a rectangle and a square. Value of $t =$ _____

- (a) 29°
 (b) 31°
 (c) 39°
 (d) 145°



45. 7 thousands + 18 hundreds + 14 tens = P

What is the place of digit '8' in P ?

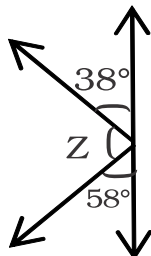
- (a) Tens (b) Hundreds (c) Thousands (d) Ten thousands

- 46.** In a car park, there are 135 cars and some motorcycles. If $\frac{1}{6}$ of the vehicles are motorcyces, find the number of motorcyces ?
(a) 37 (b) 17 (c) 27 (d) 30
- 47.** Mrs. Rani paid ₹963 for a Book set. She paid ₹63 for the G.S.T. What percentage of the price was the G.S.T. ?
(a) 5% (b) 6% (c) 6.5% (d) 7%
- 48.** Area of square is 225 sq cm. Its perimeter will be _____
(a) 60 cm² (b) 15 cm (c) 60 cm (d) 15 cm²
- 49.** The bags are arranged in 16 rows each containing 7 bags. If they are arranged in 14 rows, how many bags will be there in each row ?
(a) 8 (b) 7 (c) 9 (d) 6
- 50.** Instead of dividing a number by 24, a student divided it by 36 and got a quotient as 101 and remainder as 12. Had it been divided by 24, what would be the remainder?
(a) 12 (b) 0 (c) 25 (d) 24

Mock Paper - 2 SECTION - 1

- 1.** $39451 + 67932 =$ _____
 (a) 107283 (b) 170383
 (c) 117383 (d) 107383
- 2.** $86241 - 4197 =$ _____
 (a) 82044 (b) 80244
 (c) 82440 (d) 82404
- 3.** $7249 + 2387 - 874 =$ _____
 (a) 8765 (b) 8762
 (c) 8752 (d) 8672
- 4.** $4672 - (435 + 729) =$ _____
 (a) 3580 (b) 3408
 (c) 3508 (d) 3058
- 5.**
- | | | | | |
|-------|---|---|---|---|
| | 4 | 2 | 3 | 4 |
| + | 2 | 7 | 8 | 7 |
| + | 1 | 2 | 9 | 8 |
| + | 3 | 7 | 4 | 7 |
| + | 1 | 0 | 7 | 3 |
| ----- | | | | |
| ----- | | | | |
- (a) 13139 (b) 13039
 (c) 13319 (d) 11339
- 6.** $(7 + 10 + 12 + 15 + 19) + \square = 89$
 (a) 24 (b) 16
 (c) 26 (d) 36
- 7.** $62 \times 35 =$ _____
 (a) 2710 (b) 2170
 (c) 2070 (d) 2270
- 8.** $7515 \div 15 =$ _____
 (a) 501 (b) 401
 (c) 510 (d) 511
- 9.** If 4972 is divided by 17,
 leaves remainder _____
 (a) 7 (b) 8
 (c) 6 (d) 5
- 10.** $13 \times 22 + \square = 430$
 (a) 134 (b) 146
 (c) 154 (d) 144
- 11.** $135 - (13 \times \square) = 31$
 (a) 7 (b) 9
 (c) 8 (d) 10
- 12.** There are _____ prime numbers
 between 53 and 83
 (a) 6 (b) 7
 (c) 8 (d) 5
- 13.** The sum of 21th odd number
 and 26th even number is _____
 (a) 92 (b) 91
 (c) 93 (d) 90
- 14.** Compare : $\frac{11}{8} \square \frac{13}{9}$
 (a) > (b) <
 (c) = (d) None of these

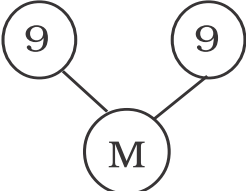
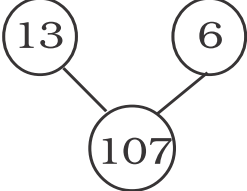
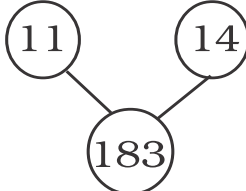
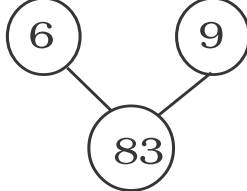
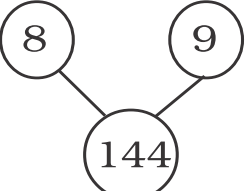
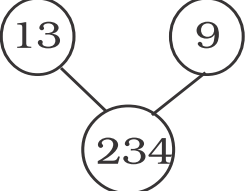
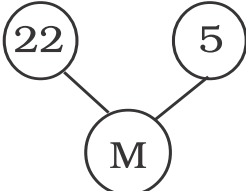
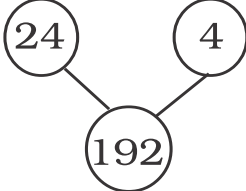
- 15.** Supplementary angle of 139° is _____
(a) 21° (b) 31°
(c) 41° (d) 51°
- 16.** At 6:05, the angle formed between the two hands of a clock is _____
(a) acute (b) obtuse
(c) straight (d) right
- 17.** ☺ represent 7 smiley faces, number of ☺ to represent 91 smiley faces is = _____
(a) 12 (b) 14
(c) 13 (d) 15
- 18.** Diameter of a circle is 17cm, its radius = _____
(a) 9 cm (b) 7.5cm
(c) 8 cm (d) 8.5 cm
- 19.** $x = 16$, $y = 12$, $z = 20$, find the value of $z \div x \times y$
(a) 15 (b) 14
(c) 16 (d) 13
- 20.**



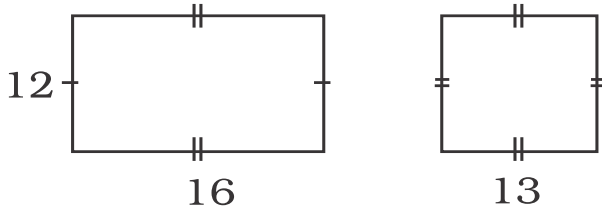
$z =$ _____

- (a) 64° (b) 84°
(c) 85° (d) 74°

SECTION - 2

- 21.** Subtract 28 tens from 49 hundreds and 19 ones. The place value of digit 3 in the result is _____
 (a) 3 ones (b) 3 tens
 (c) 3 hundreds (d) 3000
- 22.** A machine produces 250 pieces of goods in 75 mins. 400 pieces of goods will be produced in how many minutes ?
 (a) 125 (b) 130
 (c) 120 (d) 110
- 23.** The sum of prime numbers between 13 to 41 is _____
 (a) 156 (b) 183
 (c) 195 (d) 166
- 24.** L.C.M of 28 and 72 is _____
 (a) 540 (b) 404
 (c) 514 (d) 504
- 25.** H.C.F of 35 and 47 is _____
 (a) 2 (b) 0
 (c) 1 (d) None of these
- 26.** The sum of all divisors of 48 is _____
 (a) 114 (b) 124
 (c) 134 (d) None of these
- 27.** If 19th January 2002 is Sunday, then the day on 19th May 2002 is _____
 (a) Monday (b) Wednesday
 (c) Thursday (d) Friday
- 28.** CCIV – XLI + CVIII = _____
 (a) 272 (b) 217
 (c) 281 (d) 271
- 29.** Observe the number bond and find the value of 'M'
- | | |
|--|---|
|  |  |
|  |  |
- (a) 120 (b) 110
 (c) 101 (d) 105
- 30.**
- | | |
|--|---|
|  |  |
|  |  |
- (a) 230 (b) 210
 (c) 220 (d) 225

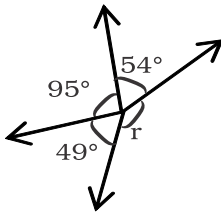
31.



The difference between area of rectangle and square is _____ sq unit.

- (a) 23
- (b) 13
- (c) 24
- (d) 33

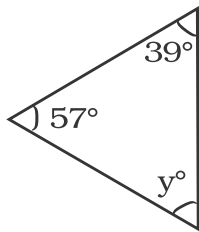
32.



value of $r =$ _____

- (a) 168°
- (b) 165°
- (c) 172°
- (d) 162°

33.



value of $y =$ _____

- (a) 86°
- (b) 74°
- (c) 84°
- (d) 82°

34.

The value of, $16 \times 5 - 126 \div 14 - 71$ is _____

- (a) 3
- (b) 0
- (c) 2
- (d) 1

35.

$\frac{3}{8}$ of 4 yrs 8 months = _____

- (a) 18
- (b) 23
- (c) 21
- (d) 25

36.

The product of the complementary and supplementary angle of 85° is _____

- (a) 455
- (b) 475
- (c) 450
- (d) 405

37.

If $p = 1$, $q = 5$ and $r = 2$ value of $p + 2q + 3r =$ _____

- (a) 13
- (b) 16
- (c) 17
- (d) 70

38.

$8^2 + \square^2 = 10^2$, the number in the \square is _____

- (a) 4
- (b) 16
- (c) 8
- (d) 6

39.

Length of square = 17m \therefore Perimeter = _____

- (a) 72m
- (b) 58m
- (c) 78m
- (d) 68 m

40.

$X + Y = 117$

$X - Y = 49$, then $X = ?$

- (a) 63
- (b) 73
- (c) 83
- (d) 93

SECTION - 3

41. Look at this schedule of interview times. If the pattern continues, what is the time of 11th interview.

Interview	Time
1st	1 : 00
2nd	1 : 40
3rd	2 : 20
4th	3 : 00

- (a) 8 : 20 (b) 7 : 00 (c) 6 : 20 (d) 7 : 40

42. Mr. Nair sold 91 teddy bears and 16 dolls. He sold each teddy bear for ₹52 and total amount he received after selling both the articles was ₹5068. What is the price of each doll?

- (a) ₹25 (b) ₹21 (c) ₹31 (d) ₹20

43. The height of Meena, Leena and Tina are given below :

Meena	Leena	Tina
1 m 65 cm	1 m 54 cm	1 m 70cm

Find their average height in meters & centimeters

- (a) 1 m 63 cm (b) 1 m 36 cm (c) 1 m 64 cm (d) 1 m 65 cm

44. Rahul sold 46 out of 90 tickets for ₹11 each and the remaining for ₹15 per ticket. Find the total amount he received?

- (a) ₹1161 (b) ₹1616 (c) ₹1016 (d) ₹1166

45. In the adjoining sum of division, the remainder is zero and the digit at * place are same. Find the digit in place of *.

- (a) 5 (b) 6
(c) 7 (d) 2

$$\begin{array}{r} 3 * 4 \\ 12 \overline{) 43 * 8} \end{array}$$

- 46.** There are 102 red balls in a basket. Sachin takes out 3 red balls and replaces them with 4 white balls. He continues the process till all the red balls are replaced by white ones. Calculate the number of white balls finally in the basket ?
- (a) 106 (b) 126 (c) 136 (d) 142
- 47.** Find the difference between the place value of the digit 4 in the number 6421 and the number formed by reversing the digit of given number.
- (a) 440 (b) 360 (c) 340 (d) 400
- 48.** A student is punished to run 9 complete rounds around a rectangular field whose length is 32 meters and breadth 21 meters. Calculate the distance run by the student.
- (a) 954 m (b) 106 m (c) 944 m (d) 945 m
- 49.** Manali separated 75 index cards by colours into four group as follows :
- $\frac{1}{3}$ of them were blue
 - 32% of them were yellow
 - $\frac{1}{5}$ of them were green
 - 11 of them were red
- Which colour group contained the greatest number of cards.
- (a) Green (b) Red (c) Yellow (d) Blue
- 50.** $A = 7$, $B = 2A + 1$ and $C = B - A$, find $A + B \times C = ?$ (use DMAS)
- (a) 127 (b) 176 (c) 30 (d) None of these

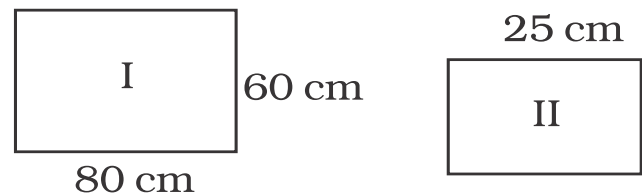
Extra Practice Questions

1. I finished reading a book in one week, reading 100 pages every day. If a boy takes 35 days to finish the same book, how many pages must he have read per day ?
(a) 35 (b) 20 (c) 70 (d) 10
2. If 4 litres of milk is purchased every day in the month of September, what will be the total bill for September if the price of milk is ₹15 per litre ?
(a) ₹1080 (b) ₹1600 (c) ₹1700 (d) ₹1800
3. Menu has 48 flowers out of which $\frac{1}{3}$ are lilies, $\frac{1}{4}$ are sunflowers and the remaining are roses. How many roses does Menu have ?
(a) 20 (b) 18 (c) 16 (d) 12
4. The length of rectangle is 28 cm and its breadth is 20 cm. If a square has the same perimeter as the rectangle, what is the length of the side of the square ?
(a) 48 cm (b) 24 cm (c) 16 cm (d) 36 cm
5. Rupali has half the number of marbles Vaishali has. Sonali has 3 times the marbles Rupali has. If Vaishali has 36 marbles, what is the total number of marbles with all three girls ?
(a) 36 (b) 60 (c) 108 (d) 72
6. An officer earns 5 times that of a clerk. If the sum of their pay for a week is ₹7200, what is the pay of the officer for a week ?
(a) ₹1200 (b) ₹5760 (c) ₹4000 (d) ₹6000
7. $m + 12 + n = 48$. If $m = 30$, what is $\frac{1}{2}$ of value of n ?
(a) 6 (b) 12 (c) 3 (d) 24

8. Rina is 6 years younger than Jane. After 10 years, the sum of their ages will be 34 years. What is the present age of Jane ?
 (a) 6 yrs (b) 16 yrs (c) 10 yrs (d) 21 yrs

9. The perimeter of the second rectangle is $\frac{1}{4}$ the perimeter of the first rectangle. What is the breadth of the second rectangle ?

- (a) 10 cm
 (b) 12 cm
 (c) 15 cm
 (d) 20cm



10. Madhu had 85 trees in her garden. Out of those trees 25 were of Mango; and 40 were of Teak. The remaining trees were of Ashoka. What fraction of the trees in the garden are Ashoka ?
 (a) 20 (b) $\frac{6}{17}$ (c) $\frac{4}{17}$ (d) $\frac{9}{17}$

11. There are 7 sacks each containing 80 kg grain. This grain was put into cans. If each can is of 16 kg, how many such cans will be needed ?
 (a) 35 (b) 70 (c) 56 (d) 80

12. Three fractions having the same denominators have numerators 4, 5 and 6. What should be the denominator as to get the sum of the three fractions equal to 3 ?
 (a) 5 (b) 10 (c) 15 (d) 45

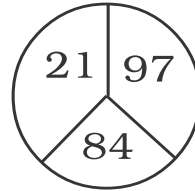
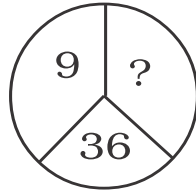
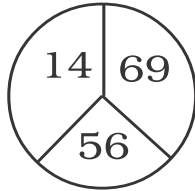
13. The sum of each row and column is given, find the value of 'A' ?

- (a) ₹12
 (b) ₹84
 (c) ₹125
 (d) ₹45

A	B	C	₹125
D	B	B	₹196
C	B	D	₹240
₹267	₹54	₹240	

- 14.** Maya is 92cm tall. Her brother Jay is twice as tall as Maya. How tall is Maya's mother if she is 36 cm shorter than Jay ?
 (a) 148 cm (b) 152 cm (c) 138 cm (d) 164 cm

- 15.** Find the missing number in the number pattern below :



- (a) 29 (b) 39 (c) 49 (d) 59

- 16.** How many two digit number, smaller than 90 have sum of their digits equal to 8.
 (a) 8 (b) 7 (c) 6 (d) 5

- 17.** $\bigcirc \times \Delta = 144$
 $\bigcirc - * = 0$
 $\Delta + \Delta + \Delta = 72$
 find the value of *.

- (a) 7 (b) 5 (c) 0 (d) 6

- 18.** If $a \diamond b = 5 \diamond 6$, then $a \times 17 - b \times 13 = \square$

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

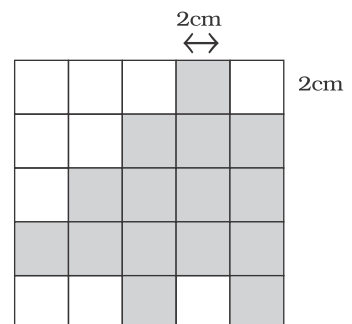
- 19.** What will be the 8th term in the given series,

204, 324, 444, _____, _____, _____, _____, _____

- (a) 924 (b) 1044 (c) 1404 (d) 1164

- 20.** Find the perimeter of shaded region.

- (a) 44 cm
 (b) 22 cm
 (c) 46 cm
 (d) 24 cm



ANSWER SHEET**Mock Paper - 1**

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

Mock Paper - 2

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

Extra Practice Question Paper
Section - 3

1	b	2	d	3	a	4	b	5	c	6	d	7	c	8	c	9	a	10	c
11	a	12	a	13	d	14	a	15	c	16	a	17	d	18	b	19	b	20	a
21	c	22	d	23	b	24	d	25	b	26	c	27	a	28	a	29	d	30	b

SECTION 3 (Solutions)

Mock Paper - 1

- 41) The sum of two facing pages Aamir stopped reading = 121
 \therefore Do half of one number before 121 = $120 \div 2 = 60$
 \therefore The page number where he stopped reading is 60 & 61
 Total no. of pages = 260
 \therefore Pages left to be read = $260 - 61 = 199$
- 42) $B = 33 + 49 = 82$
 $A = 163 - 82 = 81$
 Now, their difference,
 $= B - A = 82 - 81 = 1$
- 43) Using DMAS,
 $104 - \frac{48}{8} \times 2 + 4 = ? + 16$
 $\therefore 104 - \frac{6 \times 2}{2} + 4 = ? + 16$
 $\therefore 104 - 12 + 4 = ? + 16$
 $\therefore \frac{104 + 4 - 12}{2} = ? + 16$
 $\therefore \frac{108 - 12}{2} = ? + 16$
 $\therefore \frac{96}{2} = ? + 16$
 $\therefore 48 = ? + 16$
 $\therefore ? = 48 - 16$
 $\therefore ? = 32$
 The missing number is 32
- 44) Each angle of rectangle and square is always 90°
 Complete angle means 360°
 $90^\circ + 35^\circ + 90^\circ + 5t = 360^\circ$
 $\therefore 215 + 5t = 360$
 $\therefore 5t = 360 - 215$
 $\therefore 5t = 145$
 $\therefore t = 145 \div 5 = 29^\circ$
- 45) $7000 + 1800 + 140 = P$
 $8940 = P$
 Digit 8 is at thousand's place
- 46) Total no of cars = 135
 Total no of motorcycles = ?
 Fraction part of motorcycle = $\frac{1}{6}$
 \therefore Fraction part of cars = $\frac{5}{6}$
 Now, $\frac{5}{6}$ part of total vehicles = Total cars
 $\therefore \frac{5}{6} \times \text{Total vehicles} = 135$
 $\therefore \text{Total vehicles} = 135 \times \frac{6}{5} = 162$
 \therefore No of motorcycles = $162 - 135 = 27$

- 47) Total amount of book = ₹963
 Amount of G.S.T = $963 - 900 = 63$
 \therefore Percentage of G.S.T = $\frac{63}{900} \times 100 = 7\%$
- 48) Area of square = 225 sqcm
 \therefore Each side = $\sqrt{225} = 15$ cm
 \therefore Perimeter = $4 \times \text{side} = 4 \times 15 = 60$ cm
- 49) No. of bags = $16 \times 7 = 112$
 Now, 112 bags are arranged in 14 rows
 \therefore Bags in each row = $112 \div 14 = 8$
- 50) Dividend = Divisor \times Quotient + Remainder
 $= 36 \times 101 + 12 = 3636 + 12 = 3648$
 Now, $3648 \div 24 = 152$
 \therefore Remainder = 0

Mock Paper - 2

- 41) The time gap of each interview is of 40 minutes.
 If the series goes on the 11th interview will be at 7 : 40.
- 42) No. of teddy bears sold = 91
 selling price of each teddy bear = ₹52
 \therefore Total selling price of teddy bear = $91 \times 52 = ₹4732$
 selling price of 16 dolls = $5068 - 4732 = ₹336$
 \therefore price of each doll = $336 \div 16 = ₹21$
- 43) Height of Meena = 1 m 65 cm = 165 cm
 Height of Leena = 1 m 54 cm = 154 cm
 Height of Tina = 1 m 70 cm = 170 cm
 Average = $\frac{\text{Total sum of observations}}{\text{Total No. of observations}} = \frac{165 + 154 + 170}{3} = \frac{489}{3} = 163$ cm
 = 1 m 63 cm
- 44) Total tickets = 90
 selling price of 46 tickets = $46 \times 11 = ₹506$
 selling price of remaining tickets = $44 \times 15 = ₹660$
 \therefore Total amount he received = $506 + 660 = ₹1166$

- 45) In the last step, it should come 4, take down 8, it becomes 48. Remainder is zero so, $6 - 2 = 4$. The digit at * place is 6.
- $$\begin{array}{r} 3 * 4 \\ 12 \overline{) 42 * 8} \\ \underline{- 36} \textcircled{6} \\ 07 * \\ \underline{- 72} \downarrow \\ 48 \\ - 48 \\ \hline 00 \end{array}$$
- 46) We need to take out 3 red balls and replace it with 4 white balls.
 \therefore Each time while doing this process one ball will increase in the basket, $102 \div 3 = 32$ times so, now in the basket total number of balls = $102 + 32 = 136$.
- 47) Original number = 6421
 Reversed number = 1246
 Difference between the place value of digit $4 = 400 - 40 = 360$
- 48) Distance complete in one round = its Perimeter
 Length = 32 m, Breadth = 21 m
 \therefore Perimeter = $2(L + B)$
 $= 2(32 + 21)$
 $= 2 \times 53 = 106$ m
 Distance complete in 9 rounds = $106 \times 9 = 954$ m
- 49) Total no. of index cards = 75
 $\frac{1}{3}$ are blue = $\frac{1}{3} \times 75 = 25$
 32% are yellow = $\frac{32}{100} \times 75 = 24$
 $\frac{1}{5}$ are green = $\frac{1}{5} \times 75 = 15$
 11 are red
 correct answer is blue.
- 50) $A = 7$; $B = 2A + 1 = 2 \times 7 + 1 = 14 + 1 = 15$
 $C = B - A = 15 - 7 = 8$
 $\therefore A + B \times C$ (use DMAS)
 $\therefore 7 + 15 \times 8$
 $\therefore 7 + 120 = 127$

Extra Practice Questions

- 1) In one week, reading 100 pages per day I finished the book .
 \therefore No of pages = $100 \times 7 = 700$
 Now, to read 700 pages a boy takes 35 days.
 \therefore His per day pages = $700 \div 35 = 20$
- 2) 4 litres of milk is purchased everyday. price of milk per litre = ₹15
 \therefore Total bill in the month of September = $4 \times 15 \times 30 = ₹1800$.
- 3) Total no. of flowers = 48
 No. of lilies = $\frac{1}{3} \times 48 = 16$
 No. of sunflowers = $\frac{1}{4} \times 48 = 12$
 \therefore Total no. of both flowers = $16 + 12 = 28$
 \therefore No of roses = $48 - 28 = 20$

- 4) Length of rectangle = 28 cm
 Breadth of rectangle = 20 cm
 \therefore Perimeter = $2(l + b) = 2(28 + 20) = 2 \times 48 = 96$ cm
 Perimeter of rectangle = Perimeter of square
 \therefore Perimeter of square = 96 cm
 \therefore Square each side = $96 \div 4 = 24$ cm
- 5) No. of marbles with Vaishali = 36
 No. of Marbles with Rupali = $\frac{1}{2} \times 36 = 18$
 No. of Marbles with Sonali = $3 \times 18 = 54$
 \therefore Total no. of Marbles = $36 + 18 + 54 = 108$
- 6) If clerk earns ₹1, then officers earning is 5 times of clerk = ₹5
 \therefore Total amount both earn in a week = ₹7200
 Now, do 7200 in 6 equal parts
 i.e. $7200 \div 6 = ₹1200$
 so, clerk earns ₹1200
 Offices earning = $7200 - 1200 = ₹6000$
- 7) $m + 12 + n = 48$; $m = 30$
 $30 + 12 + n = 48$
 $42 + n = 48$
 $\therefore n = 48 - 42 = 6$, now half of $n = 6 \div 2 = 3$
- 8) After 10 years, Rina's and Jane's age together is 34 years and Rina is 6 years younger.
 \therefore $\begin{array}{r} 34 \\ - 6 \\ \hline 28 \end{array}$ - Difference of their ages
 - divide it in 2 equal halves
 $\begin{array}{r} 14 \\ 14 \end{array}$
 (Rina) 14 (Jane) 14
 $\begin{array}{r} 14 \\ + 6 \\ \hline 20 \end{array}$ as Jane is 6 yrs elder
- So, after 10 yrs, Rina's age = 14 yrs and Janes age = 20 yrs
 \therefore Jane's present age = $20 - 10 = 10$ yrs
- 9) Perimeter of (I) rectangle = $80 + 80 + 60 + 60 = 280$ cm
 Perimeter of (II) rectangle = $\frac{1}{4} \times 280 = 70$ cm
 Now, (II) rectangle, Perimeter = 70 and length = 25 cm
 $\therefore 25 + 25 + B + B = 70$, $\therefore 2B = 20$
 $\therefore 2B = 70 - 50$, $\therefore B = \frac{20}{2} = 10$ cm
- 10) Total no of trees = 85
 \therefore No of Mango trees = 25
 \therefore No of Teak trees = 40
 \therefore No. of Ashoka trees = $85 - (25 + 40) = 85 - 65 = 20$
 \therefore Fraction part of Ashoka trees = $\frac{20}{85} = \frac{4}{17}$
- 11) 7 sacks each containing 80 kg grain
 \therefore Total weight = $80 \times 7 = 560$ kg
 Now, each can is of 16 kg
 \therefore No of cans = $560 \div 16 = 35$

- 12) If denominator is the same, add the numerators.

$$\frac{4}{\square} + \frac{5}{\square} + \frac{6}{\square} = \frac{15}{\square}$$
 sum of all three fractions is equal to 3

$$\therefore \frac{15}{\square} = \frac{3}{1}$$
 } Equivalent fractions

$$\therefore \square = 5$$
- 13) $B + B + B = 54$
 $\therefore 3B = 54$
 $\therefore B = 54 \div 3 = ₹18$
 Now, $D + B + B = 196$
 $\therefore D + 18 + 18 = 196$
 $\therefore D + 36 = 196$
 $\therefore D = 196 - 36 = ₹160$
 Now, $C + B + D = 240$
 $\therefore C + 18 + 160 = 240$
 $\therefore C + 178 = 240$
 $\therefore C = 240 - 178 = ₹62$
 Now, $A + B + C = 125$
 $\therefore A + 18 + 62 = 125$
 $\therefore A + 80 = 125$
 $\therefore A = 125 - 80 = ₹45$
- 14) Height of Maya = 92 cm
 Height of Jay = $2 \times 92 = 184$ cm
 Height of Mother = $184 - 36 = 148$ cm
- 15) Its a pattern,
 i) $14 \times 4 = 56 + 13 = 69$
 ii) $9 \times 4 = 36 + 13 = 49$
 iii) $21 \times 4 = 84 + 13 = 97$
 correct answer is 49.
- 16) 17, 26, 35, 44, 53, 62, 71, 80.
 option (a) is correct
- 17) $\triangle + \triangle + \triangle = 72$
 $\therefore \triangle = 72 \div 3 = 24$
 $\circ \times \triangle = 144$
 $\circ \times 24 = 144$
 $\therefore \circ = 144 \div 24 = 6$
 Now, $\circ - * = 0$
 $\therefore 6 - * = 0$
 $\therefore * = 6$
- 18) $a \diamond b = 5 \diamond 6$
 Means, $a = 5, b = 6$
 $a \times 17 - b \times 13$
 $5 \times 17 - 6 \times 13$
 $85 - 78 = 7$
- 19) The difference between each number is 120.
 \therefore The 8th number is 1044.
- 20) Count the boundaries of shaded part, its comes out to 22 sides
 $\therefore 22 \times 2 = 44$ cm
- 21) Correct answer is 2864, as it fullfills all the given conditions.
- 22) Total number of students = 200
 present percentage = 75%
 \therefore Absent percentage = $(100\% - 75\%) = 25\%$
 \therefore No of students absent = 25% of 200

$$= \frac{25}{100} \times 200 = 50$$
- 23)
- | | Hrs | mins | secs |
|---------------|----------|-----------|-----------|
| For Satish | 2 | 40 | 15 |
| For Deepak(-) | <u>2</u> | <u>35</u> | <u>48</u> |
| | 0 | 04 | 27 |
- 4 mins and 27 seconds
- 24) 1 km = 1000 m
 $\therefore (1000 \div 50) \times 2 + 2$
 $\therefore 20 \times 2 + 2$
 $\therefore 40 + 2 = 42$ trees
- 25) $a = 2, b = 3$ and $c = 1$
 option (b) is correct $2a + b + 3c$

$$= 2 \times 2 + 3 + 3 \times 1$$

$$= 4 + 3 + 3 = 10$$
- 26) Product of three numbers = 1001
 one numbers is 7
 \therefore product of other two numbers will be $1001 \div 7 = 143$
 $\therefore 11 \times 13 = 143$
 \therefore greatest of those three numbers = 13
- 27) Two dozens are distributed among 6 boys.
 Means, 24 balls among 6 boys
 \therefore Each boy will get $24 \div 6 = 4$ balls
 Now, 40 boys will get $40 \times 4 = 160$ balls
- 28) Malati gave $\frac{2}{9}$ of beads to Madhuri and $\frac{5}{9}$ to Shobana. 16 beads were left over.
 Total part given to Madhuri and Shobana =

$$\frac{2}{9} + \frac{5}{9} = \frac{7}{9}$$

 \therefore Left over part = $\frac{2}{9}$
 $\therefore \frac{2}{9}$ of total beads = 16
 \therefore Total beads = $\frac{16 \times 9}{2} = 72$
 \therefore Total beads with Madhuri and Shobana = $72 - 16 = 56$
- 29) The sum vertically, horizontally and diagonally is 27
 $\therefore A = 27 - (10 + 13) = 27 - 23 = 4$
 $\therefore B = 27 - (9 + 15) = 27 - 24 = 3$
 $\therefore C = 27 - (14 + 8) = 27 - 22 = 5$
 option (d) is correct, as digit 2 is not used.
- 30) Divisor = 17, Quotient = 16
 Remainder = 15, Dividend = ?
 \therefore Dividend = Divisor \times Quotient + Remainder

$$= 17 \times 16 + 15$$

$$= 272 + 15 = 287$$



MENTAL MATHS COMPETITION[®]

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

Name _____ Father's Name _____ Surname _____

School Name _____

Std. _____ Mobile No. _____

Examination Centre _____ Date : _____

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.

Incorrect way of shading

(A) (B) (C) (D)

(A) (B) (C) (D)

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Correct way of shading

(A) (B) (C) (D)

ANSWERS

Section - I

1. (A) (B) (C) (D)

2. (A) (B) (C) (D)

3. (A) (B) (C) (D)

4. (A) (B) (C) (D)

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12. (A) (B) (C) (D)

13. (A) (B) (C) (D)

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Section - II

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Section - III

41. (A) (B) (C) (D)

42. (A) (B) (C) (D)

43. (A) (B) (C) (D)

44. (A) (B) (C) (D)

45. (A) (B) (C) (D)

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47. (A) (B) (C) (D)

48. (A) (B) (C) (D)

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For Office Use Only

Section	Mark	Marks Scored
1	x1	
2	x2	
3	x4	
Total		

Remark :



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Incorrect way of shading



Correct way of shading



ANSWERS

Section - I

1. (A) (B) (C) (D)
2. (A) (B) (C) (D)
3. (A) (B) (C) (D)
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39. (A) (B) (C) (D)
40. (A) (B) (C) (D)

Section - III

41. (A) (B) (C) (D)
42. (A) (B) (C) (D)
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1	x1	
2	x2	
3	x4	
Total		

Remark :