Mental Maths Competition®

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In Association with

Math Vision Pte Ltd., Singapore.

MOCK TEST

Std. 6

Instructions for the Competition

Total Marks : 200 **Total No of questions: 75**

1. Time : 1½hr
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 explosure 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 test fundamental concept covered in topic listed below. Each question carries 3 marks.
6. [Section 3] Here questions are challenging & required high order thinking skills. Each question carry 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.

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SECTION 1 (Mental Maths Calculation)

1. 35210 less than 65432 = _____

(a) 30122 (b) 30222
(c) 31122 (d) 31222

2. 5162 more than 41363 = _____

(a) 41526 (b) 44626
(c) 44426 (d) 46525

3. 9510 is _____ less than 10000.

(a) 590 (b) 480
(c) 490 (d) 580

4. 4136 is _____ more than 2500

(a) 6536 (b) 1636
(c) 6646 (d) 6666

5. (4234 – 1163) + (2164) = _____

(a) 5235 (b) 4325
(c) 5236 (d) 4324

6. (8534 + 2163) – (2164) = _____

(a) 5833 (b) 8523
(c) 8533 (d) 8633

7.
$$\begin{array}{r} 3\ \boxed{A}\ 4\ 2 \\ +\ 5\ 3\ 1\ \boxed{B} \\ \hline 9\ 2\ \boxed{C}\ 1 \end{array}$$

A + B + C = ☐

(a) 21 (b) 22
(c) 23 (d) 24

8.
$$\begin{array}{r} 8\ \boxed{A}\ 6\ \boxed{B} \\ -\ 3\ 8\ 1\ 3 \\ \hline 4\ 4\ \boxed{C}\ 9 \end{array}$$

A + B + C = ☐

(a) 5 (b) 6
(c) 8 (d) 9

9. Which of following is 900 less than 2154

(a) 1354 (b) 1254
(c) 1154 (d) 1454

10. 2419 is _____ hundreds more than 1219.

(a) 2 (b) 12
(c) 120 (d) 1200

11.
$$\begin{array}{r} 4\ 1 \\ \times\ 7\ 1 \\ \hline \_\_\_\_ \end{array}$$

(a) 2711 (b) 2811
(c) 2911 (d) 2011

12.
$$\begin{array}{r} 61 \\ \times\ 48 \\ \hline \end{array}$$

(a) 2928 (b) 2938

(c) 2948 (d) 2958

13.
$$\begin{array}{r} 913 \\ \times\ 413 \\ \hline \end{array}$$

(a) 377869 (b) 377769

(c) 37869 (d) 377069

14.
$$\begin{array}{r} 451 \\ \times\ 368 \\ \hline \end{array}$$

(a) 165908 (b) 165967

(c) 165968 (d) 166968

15. $22\overline{)2904}$

(a) 136 (b) 132

(c) 133 (d) 134

16. $18\overline{)9468}$

(a) 425 (b) 526

(c) 525 (d) 536

17. $\left(8\overline{)32}\right) \times (4 \times 3) - \left(9\overline{)45}\right)$

(a) 53 (b) 48

(c) 43 (d) 42

18. $[9 \times 9] - [4 \times 7] - [9 \times 5]$

(a) 53 (b) 9

(c) 7 (d) 8

19. 18 tens ÷ 6 = _____

(a) 3 (b) 33

(c) 13 (d) 30

20. 30 tens × 5 = _____

(a) 150 (b) 1500

(c) 15000 (d) 60

21. $\frac{9}{8} + \frac{1}{4} = \frac{\square}{\square}$

(a) $\frac{10}{8}$ (b) $\frac{11}{8}$

(c) $\frac{12}{8}$ (d) $\frac{13}{8}$

22. $\frac{1}{6} + \frac{1}{8} = \frac{\square}{\square}$

(a) $\frac{2}{12}$ (b) $\frac{4}{24}$

(c) $\frac{6}{18}$ (d) $\frac{7}{24}$

23. $\frac{4}{16} - \frac{1}{8} = \frac{\square}{\square}$

(a) $\frac{2}{8}$ (b) $\frac{1}{16}$

(c) $\frac{2}{16}$ (d) $\frac{4}{12}$

24. $\frac{24}{7} - \frac{1}{3} = \frac{\square}{\square}$

(a) $\frac{23}{21}$ (b) $\frac{65}{21}$

(c) $\frac{25}{14}$ (d) $\frac{12}{28}$

25. $\frac{4}{9}, \frac{1}{3}, \frac{1}{6}, \frac{4}{6}$ The smallest fraction is –

(a) $\frac{1}{3}$ (b) $\frac{1}{6}$

(c) $\frac{4}{6}$ (d) $\frac{4}{9}$

26. $\frac{8}{5}, \frac{3}{15}, \frac{1}{15}, \frac{6}{5}$ the greatest fraction is –

(a) $\frac{8}{5}$ (b) $\frac{3}{15}$

(c) $\frac{1}{15}$ (d) $\frac{6}{5}$

27. $\frac{1}{3} = \frac{\square}{21}$

The missing number is

(a) 8 (b) 7

(c) 4 (d) 21

28. $\frac{4}{5} = \frac{28}{\square}$

(a) 40 (b) 28

(c) 30 (d) 35

29. $\frac{3}{4} \times \frac{5}{6} \times \frac{16}{7} = \frac{\square}{\square}$

(a) $\frac{135}{240}$ (b) $\frac{130}{160}$

(c) $\frac{10}{7}$ (d) $\frac{66}{48}$

30. $\frac{9}{8} \times \frac{4}{3} \times \frac{12}{5} = \frac{\square}{\square}$

(a) $\frac{18}{5}$ (b) $\frac{22}{80}$

(c) $\frac{40}{120}$ (d) $\frac{360}{24}$

31. $\frac{5}{7} \div \frac{14}{35} = \frac{\square}{\square}$

(a) $\frac{16}{80}$ (b) $\frac{25}{14}$

(c) $\frac{36}{28}$ (d) $\frac{45}{30}$

32. $\frac{9}{80} \div \frac{4}{56} = \frac{\square}{\square}$

(a) $\frac{36}{540}$ (b) $\frac{36}{256}$

(c) $\frac{60}{80}$ (d) $\frac{63}{40}$

33. $7\frac{1}{3} \times 15 =$ _____

(a) 12 (b) 35

(c) 105 (d) 110

34. $3\frac{1}{5} \times 25 =$ _____

(a) 80 (b) 72

(c) $\frac{83}{5}$ (d) $\frac{38}{5}$

35. 5 kg 450 grm + 3 kg 750 grm = _____ kg

(a) 8 kg 200 (b) 9 kg 400

(c) 9 kg 200 (d) 9 kg 500

36. 9 / 375 m/ = 2/ 820 m/ + ____

(a) 6.555 / (b) 7.550 /

(c) 7.655 / (d) 7.250 ml

37. 5 hr 49 min + 2 hrs 43 min = _____ hrs

(a) 8:50 hr (b) 8:32 hr

(c) 8:52 hr (d) 9:10 hr

38. 6 hrs 29 min – 2hrs 30 min = _____ hrs

(a) 4 hr 39 min (b) 3 hr 59 min

(c) 8 hr 30 min (d) 4 hr 59 min

39. Study the number pattern what will be the next number.

28, 55, 109, ...

(a) 214 (b) 215

(c) 213 (d) 217

40. 516, 532, 548, ...

(a) 564 (b) 560

(c) 600 (d) 575

SECTION 2
(Mental Maths Concepts)

41. 19 hundreds 18 ones – ☆ = 584

Which the following number represents ☆

(a) 1354 (b) 1334

(c) 1444 (d) 1364

42. A – 4206 = 5523

A = B + 729

Find the value of B

(a) 9000 (b) 9100

(c) 8900 (d) 8500

43. The L.C.M of 4, 6 and 8 is ___

(a) 48 (b) 144

(c) 24 (d) 72

44. The H.C.F. of 12, 16 and 8 is _____

(a) 4 (b) 8

(c) 6 (d) 2

45. The sum of divisor of 27 is _____

(a) 40 (b) 36

(c) 38 (d) 39

46. Which of the following number is exactly divisible by 6

(a) 834 (b) 934

(c) 734 (d) 634

47. Which of the following number exactly divisible by 8

(a) 5033 (b) 4188

(c) 3365 (d) 3448

48. 457 hecto gram = _____ mg

(a) 4570000 (b) 45700

(c) 45700000 (d) 457000000

49. 543 decaliter = _____ centilitre

(a) 543000 (b) 5.43

(c) 54.3 (d) 5430000

50. 250 metre = _____ hecto metre

(a) 25 (b) 250

(c) 0.25 (d) 2.5

51. In 5 innings Ramesh scored 25, 37, 55, 3 and 60. Find his average score?

(a) 32 (b) 36

(c) 42 (d) 34

52. 4.5 + 19.8 + 32.568 = _____

(a) 56.841 (b) 56.828

(c) 56.868 (d) 56.851

53. 19.682 – 4.46 = _____

(a) 16.538 (b) 18.639

(c) 15.222 (d) 16.232

54. 11.4 × 1.6 = _____

(a) 15.24 (b) 18.24

(c) 17.84 (d) 18.54

55. 7.86 ÷ 0.7 = _____

(a) 11.22 (b) 12.28

(c) 10.18 (d) 13.22

56. 4 × [21 + {5 + 6 (7 – 3) }] =

(a) 200 (b) 240

(c) 100 (d) 180

57. [8 + (– 9)] – [4 × – 2] = _____

(a) – 8 (b) 10

(c) 7 (d) – 9

58. 25% of 484 = _____

(a) 121 (b) 118

(c) 128 (d) 112

59. 15% of 90 = _____

(a) 13.5 (b) 14

(c) 20 (d) 12.5

60. 50% of 47 = _____

(a) 26.5 (b) 24

(c) 25 (d) 23.5

SECTION 3 (Mental Maths Challange)

61. 36 pupil were divided equally among 6 groups. There were 2 more girls than boys in each group. How many boys were there altogether?

(a) 24 (b) 12 (c) 18 (d) 10

62. A + B = 3600
B + C = 2800
B = 3 times of C.
Find the value of A.

(a) 1500 (b) 1600 (c) 1700 (d) 1400

63. Jason and Kent had a total 16 stamps. Jason then gave 4 stamps to Kent. Both of them had an equal number of stamps in the end. How many stamps did kent have at first?

(a) 16 (b) 14 (c) 8 (d) 12

64. A Jug can hold 5*l* of water. 2 Jugs can hold as much water as 5 bottles. Find the volume of bottle?

(a) 3 *l* (b) 2 *l* (c) 1 *l* (d) 5 *l*

65. Pintu has thrice as many stamps as Chintu. If Chintu has 29 stamps. How many stamps they have altogether?

(a) 116 (b) 115 (c) 114 (d) 231

66. The mass of box A is 8 kg more than the mass of box B. The mass of box A is 5 times the mass of box C. What is a mass of Box B if the mass of box C is 10 kg?

(a) 42 (b) 48 (c) 40 (d) 44

67. Jenny spent $\frac{1}{2}$ of her money on a camera and $\frac{3}{8}$ of it on a bag. What fraction of money did she have left?

(a) $\frac{3}{8}$ (b) $\frac{4}{8}$ (c) $\frac{1}{8}$ (d) $\frac{1}{2}$

68. Ajay spent ` 208 for 4 notebook and 6 pens, if cost of notebook is ` 25. Find cost of 10 pens.

(a) ` 210 (b) ` 180 (c) ` 200 (d) ` 240

69. $\bigcirc \times \Delta = 54$

$\bigcirc - ☆ = 1$

$\Delta + \Delta = 36$

Find the value of ☆

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

70. In a group of 80 pupils, $\frac{2}{5}$ of them wear glasses of these $\frac{1}{4}$ were girls and rest are boys . How many boys in a group wearing glasses?

(a) 8 (b) 16 (c) 24 (d) 32

71. The table shows the rates of charges at a car park. Charlie parked his car at the car park from 10.30 am to 5.30 pm. How much did he have to pay

7.00 am to 4 pm	` 35 per hour
After 4.00 pm	` 50 per hour

(a) ` 286.5 (b) ` 268.5 (c) ` 276.5 (d) ` 267.5

72. Rope X is 3.2 m long

Rope Y is $\frac{3}{4}$ of Rope X

Rope Z is $\frac{1}{4}$ the length of Rope Y.

Find the total length of the 3 ropes in meters.

(a) 6.1 (b) 6.2 m (c) 6.3 m (d) 6.4 m

73. 6 teachers took 3 classes to the bird park. Each class has 30 students.
The entrance fee for an adult was ` 15. The teacher paid 600 and received a change of ` 60. What was entry fee per student.

(a) ` 5 (b) ` 4 (c) ` 6 (d) ` 8

74. Mohit read $\frac{1}{4}$ of a book. If he read further 60 pages, he would have read of $\frac{3}{4}$ the book. How many pages were there in the book.

(a) 120 (b) 36 (c) 96 (d) 144

75. [90 – {50 ÷ (30 ÷ 3)}] – 28 = _____

(a) 53 (b) 47 (c) 57 (d) 67

(Extra practise question)

1. Mrs. Sharma took 6 minute to sew 5 buttons. How many buttons could she sew in 2 hours at the same rate?

(a) 50 (b) 60 (c) 80 (d) 100

2. At the sale, shirts were sold at 3 for 675 and 5 for ` 900, how much Mrs. Joshi pay for 38 shirts?

(a) 6875 (b) 7075 (c) 6975 (d) 5115

3. A square table seat 4 people with 1 person on each side. If 20 such tables are put end to end in a row, how many people can be seated?

(a) 80 (b) 60 (c) 42 (d) 48

4. James has 36 blue marbles and 54 red marbles. He want to put an equal number of blue and red marbles into some boxes. How many boxes does he need at most?

(a) 36 (b) 9 (c) 6 (d) 18

5. ` 36 were shared among three girls. Sarika received $\frac{1}{6}$ of the money and Amita received $\frac{1}{3}$ times more than Sarika.

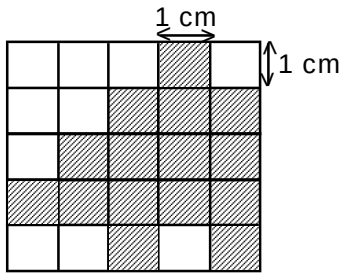
If Mayuri received the rest of the money. How much was Mayuri's share?

(a) `18 (b) ` 17 (c) ` 21 (d) ` 22

6. Mrs. Lim has 7406 rubber bands. She gave 668 of them to her neighbour and put the rest in equal numbers into six boxes. How many rubber bands are there in each box?

(a) 1123 (b) 1124 (c) 1133 (d) 1134

7.



(a) 60 m (b) 65 m (c) 66 m (d) 70 m

8. $\left(\sqrt{361}+\sqrt{225}\right)-\left(\sqrt{9}+\sqrt{81}\right)=$ _____

(a) 22 (b) 23 (c) 24 (d) 21

9. 20% of 90 + 15% of 70 + 25% of 900 = _____

(a) 252.5 (b) 253.5 (c) 254.5 (d) 255.5

10. The difference between 37.04 and 8.6 is equal to _____

(a) 24 + 4.44 (b) 28 – 0.44 (c) 85.32 – 3 (d) 94.8 × 3

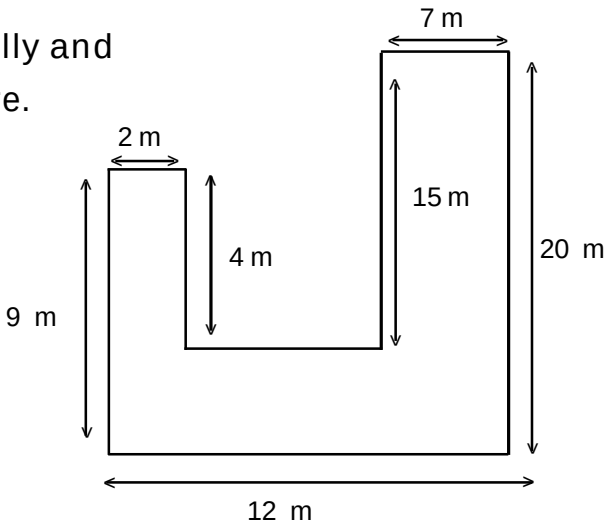
11. Which of the following numbers is perfect square number _____

(a) 3647 (b) 6889 (c) 3048 (d) 5675

12. Cost of $\frac{1}{2}$ kg sugar is `16 and $\frac{1}{4}$ kg tea powder us ` 50. Find the total cost of 5 kg sugar and 2 kg tea powder.

(a) 450 (b) 560 (c) 500 (d) 650

13. Study the figure below carefully and find the perimeter of the figure.

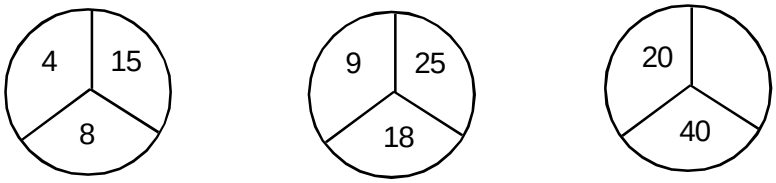


(a) 70 m (b) 71 m (c) 72 m (d) 83 m

14. An employee took 2 h 42 min to wash 9 cars if the employee took an equal amount of time to wash each car, how much time he took to wash 10 cars?

(a) 2 hrs (b) 3 hrs (c) 4 hrs (d) 3 & half hour

15. Find the missing number in the number pattern below.



(a) 44 (b) 47 (c) 46 (d) 45

16. What will be 5th term in the given series
204, 324, 444, ... , ...

(a) 584 (b) 574 (c) 684 (d) 804

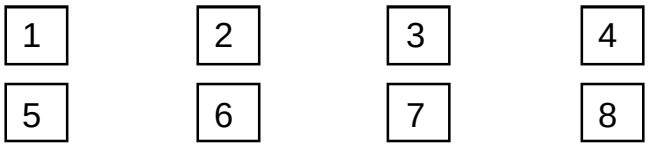
17. Which of the following number is divisible by 11

(a) 5 3 3 5 1 4 (b) 3 4 2 2 1 6
(c) 9 0 1 8 0 0 (d) 4 4 2 5 6 3

18. Find the missing number
[12 + 11 × □] ÷ 12 = 12

(a) 6 (b) 12 (c) 10 (d) 11

19. There are eight number cards are as shown below. If 3 number cards are drawn randomly each time. How many ways can the number cards form a sum of 9?



(a) 3 (b) 4 (c) 1 (d) 2

20. How many 2 digit number, smaller than 90 have sum of their digits equal to 8.

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

21. The sum of ` 475 is shared among three brothers. The eldest brother gets ` 75 more than second brother. The second brother gets ` 50 more than youngest brother.
How much does youngest brother get?

(a) ` 75 (b) ` 50 (c) ` 125 (d) ` 100

22. Find the 20th term is the number sequence. 1, 4, 7, 10, ...

(a) 60 (b) 58 (c) 62 (d) 63

23. If a ◈ b = a × 4 – b × 3 find

5 ◈ 6 = □

(a) 1 (b) 0 (c) 2 (d) 4

24. Some year ago, 1st January was Thursday. Which day of the week was 21st March in that year (Take February as 28 days in that year)

(a) Saturday (b) Monday (c) Sunday (d) Tuesday

25. Amit is 8 years 8 months old now. Ajit is twice as old as Amit and he is 2 years 5 months older than Sujit. How old will Sujit be in 3 months.

(a) 14 years 7 months (b) 14 years 11 months
(c) 14 years 8 months (d) 15 years 2 months

Answer Sheet

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

Answers for extra practice questions

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

Section 3 (Solution)

61) $36 \div 6 = 6$
Hence 6 pupils in each group.
2 more girls han boys in each group.
$\therefore$ No. of girls in each group = 4
No. of boys in each group = 2
$\therefore$ Total No. of boys = $2 \times 6 = 12$

62) $B = 3C$
$B + C = 2800$
$\downarrow$
$\therefore$ $3C + C = 2800$
$4C = 2800$
$C = 2800 \div 4 = 700$
$B = 2800 - 700$
$B = 2100$
$A + B = 3600$
$A = 3600 - 2100$
$A = 1500$

63) At the end,
Jason $\rightarrow$ 8
Kent $\rightarrow$ 8
In the beginning
Jason $8 + 4 = 12$
Kent $8 - 4 = 4$

64) One Jug $\rightarrow$ 5 litre
Two Jugs = $5 \times 2 = 10$ litre
5 bottles = 2 Jugs
= 10 litre
$\therefore$ 1 bottle = $10 \div 5 = 2$ litre.

65) Chintu $\rightarrow$ 29 stamps
Pintu $\rightarrow 29 \times 3 = 87$ stamps
Total stamps = $29 + 87$
= 116

66) Box C $\rightarrow$ 10 kg.
Box A $\rightarrow 5 \times 10 = 50$ kg.
Box B $\rightarrow 50 - 8 = 42$ kg.

67) Money spent on camera and bag

$$= \frac{1}{2} + \frac{3}{8}$$

$$= \frac{4}{8} + \frac{3}{8}$$

$$= \frac{7}{8}$$

Fraction of money she have left

$$= 1 - \frac{7}{8}$$

$$= \frac{8}{8} - \frac{7}{8}$$

$$= \frac{1}{8}$$

68) 1 notebook = 25
4 notebooks = $25 \times 4 = 100$
4 notebooks and 6 pens = 208
$\therefore$ 6 pens = $208 - 100$
= 108
$\therefore$ 1 pen = $108 \div 6$
= 18
Cost of 10 pens = $18 \times 10 = 180$

69) $\triangle + \triangle = 36$
$\triangle = 36 \div 2 = 18$
$\bigcirc \times \triangle = 54$
$\bigcirc = 54 \div 18 = 3$
$\bigcirc - \star = 1$
$\star = 3 - 1 = 2$

70) Total no. of pupils = 80
pupils wear glasses = $\frac{2}{5} \times 80$
= 32
No. of girls wearing glasses
= $\frac{1}{4} \times 32$
= 8
No. of boys wearing glasses
= $32 - 8$
= 24

71) 10.30 am to 4 pm = $5\frac{1}{2}$ hrs
4 pm to 5:30 pm = $1\frac{1}{2}$ hrs.
Amount to be paid
= $(5\frac{1}{2} \times 35) + (1\frac{1}{2} \times 50)$
= $192.5 + 75$
= 267.5

72) Rope X $\rightarrow$ 3.2 m
Rope Y $\rightarrow \frac{3}{4} \times 3.2 = 2.4$ m
Rope Z $\rightarrow \frac{1}{4} \times 2.4 = 0.6$ m
Total length = $3.2 + 2.4 + 0.6$
= 6.2 m

73) No. of teachers = 6
No. of students = 3×30
= 90
Entrance fee of teachers = 6×15
= 90
Entrance fee of 90 students
= $600 - 60 - 90$
= 450
$\therefore$ Entrance fee. of each student
= $450 \div 90$
= ` 5

74) $\frac{3}{4} - \frac{1}{4} = \frac{2}{4} = \frac{1}{2}$
$\frac{1}{2}$ of the book = 60 pages
$\therefore$ No. of pages in the book
= 60×2
= 120.

75) $[90 - \{50 \div (30 \div 3)\}] - 28$
= $[90 - \{50 \div 10\}] - 28$
= $[90 - 5] - 28$
= $85 - 28$
= 57

Extra Practice Questions (Solution)

1) 2 hours = 120 minutes
6 minutes = 5 buttons

1 minute = $\frac{5}{6}$ buttons

120 minute = $\frac{5}{6} \times 120$

= 100 buttons.

2) 38 shirts = 7 sets of 5 shirts + 1 set of 3 shirts

∴ Amount paid for 38 shirts
= (7 × 900) + (1 × 675)
= 6300 + 675
= 6975

3) In this arrangement at extreme two tables, 3 persons each can be seated where as at other 18 tables only 2 persons each can be seated.
∴ Total no. of people = 2 × 3 + 18 × 2
= 6 + 36
= 42

4) H.C.F of 36 and 54 is 18.
Maximum No. of boxes required is 18 such than he can pack 2 blue and 3 red marbles in each box.

5) Sarika → $\frac{1}{6} \times 36$ = ` 6

Amita → $6 + \frac{1}{3} \times 6$
= 6 + 2
= ` 8

Mayuri = 36 – (6 + 8)
= ` 22

6) 7406 – 668 = 6738
6738 ÷ 6 = 1123

7) 22 cm

8) $(\sqrt{361} + \sqrt{225}) - (\sqrt{9} + \sqrt{81})$
= (19 + 15) – (3 + 9)
= 34 – 12
= 22

9) $\frac{20}{100} \times 90 + \frac{15}{100} \times 70 + \frac{25}{100} \times 900$
= 18 + 10.5 + 225
= 253.5

10) 37.04 – 8.6

$$\begin{array}{r} 37.04 \\ -\ \ 8.60 \\ \hline 28.44 \end{array}$$

= 24 + 4.44

11) $\sqrt{6889}$ = 83

12) Cost of $\frac{1}{2}$ kg sugar = ` 16

Cost of 1 kg sugar = 16 × 2
= ` 32

Cost of 5 kg sugar = 5 × 32
= ` 160

Cost of $\frac{1}{4}$ kg tea powder = ` 50

∴ Cost of 1 kg tea powder
= 4 × 50
= ` 200

∴ Cost of 2 kg tea powder = 2 × 200
= ` 400

Total cost = 160 + 400
= ` 560

13) Perimeter of figure
= 9 + 4 + 15 + 20 + 12 + 12
= 72 m

14) 2 hrs 42 minutes
= 2 × 60 + 42
= 162 minutes
9 cars → 162 minutes
1 car → 162 ÷ 9 = 18 min.
10 cars → 10 × 18
= 180 minutes
= 3 hrs.

15) 4 × 2 = 8, 8 + 7 = 15
9 × 2 = 18, 18 + 7 = 25
20 × 2 = 40, 40 + 7 = 47

16) 204 + 120 = 324 (2nd)
324 + 120 = 444 (3rd)
444 + 120 = 564 (4th)
564 + 120 = 684 (5th)

17) Option (d)
$\underset{=}{4}\ 4\ \underset{=}{2}\ 5\ \underset{=}{6}\ 3$
4 + 2 + 6 = 12 and 4 + 5 + 3 = 12
12 – 12 = 0
Hence divisibility test of 11 is satisfied.

18) Option (b)
[12 + 11 × $\boxed{12}$] ÷ 12
= [12 + 132] ÷ 12
= 144 ÷ 12
= 12

19) 3 possible combinations are
1, 2, 6
1, 3, 5
2, 3, 4

20) 8 possible number are
17, 26, 35, 44, 53, 62, 71, 80.

21) Youngest $\Rightarrow$ Y
Second $\Rightarrow$ Y + 50
Eldest $\Rightarrow$ Y + 50 + 75
$= Y + 125$

$Y + Y + 50 + Y + 125 = 475$
$3Y + 175 = 475$
$3Y = 475 - 175$
$3Y = 300$
$Y = 300 \div 3$
$Y = 100$

Younger brother gets ` 100.

22) 1, 4, 7, 10 .....
difference of 3 between each consecutive term.
20th term $= 1 + 19 \times 3$
$= 1 + 57$
$= 58$

23) $a \diamond b = a \times 4 - b \times 3$

$5 \diamond 6 = 5 \times 4 - 6 \times 3$
$= 20 - 18$
$= 2$

24) Excluding 1st January
No. of days in January = 30
No. of days in February = 28
No. of days till 21st March = 21
Total = 59 days

59 ÷ 7 gives remainder 3
3rd day after Thursday is 'Sunday'.

25) Amit $\rightarrow$ 8 yrs 8 months
Ajit $\rightarrow$ 2 × (8 yrs 8 months)
$\rightarrow$ 16 yrs 16 months
$\rightarrow$ 17 yrs 4 months
Sujit $\rightarrow$ (17 yrs 4 months) – (2 yrs 5 months)
= 14 yrs 11 months.
After 3 months Sujit will be 15 yrs 2 months

Mental Maths Competition®

Topics Included.

(1) Q. No. 1 to 50 are based on basic. Calculation questions related to Addition, Subtraction, Multiplication and Division, doubling and halving.

(2) Student should know multiplication tables from 2 to 25.

(3) Number pattern, square and square root, comparision of fractions.

(4) Mixed operations (BODMAS), Decimal Fraction, Fractions, time

(5) L.C.M & H.C.F., divisibility of 2, 3, 4, 5, 6, 8, 9, 10, 11

(6) Integers (Add, Subtract, Multiply, Divide) Mixed sums

(7) Find day and date in a given calender year.

(8) Calculation of percentage, Average discount, profit and loss.

(9) Square and Square root from 1 to 30, Cubing a number from 1 to 15

(10) Conversions: kg → hecto grm, deca gram, gram, decigram, centigram, miligram
km → hecto metre, deca mt, metre, deci mt, centi mt, mili mt.
kl → hecto litre, deca lt, litre, deci lt, centi lt, mili lt.

(11) Area and perimeter of square and rectangle.