MOCK TEST

Name : _____

School : _____ Std. : **6**

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 explosure 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 challanging & 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, Number pattern
- Multiplication & Division. (Tables from 2 to 30)
- Roman Numbers (1 to 3000)
- Angles (acute, obtuse, right, straight, reflex)
- Complementary & Supplementary angles
- Algebra (Substitution, Simple equations)
- H.C.F & L.C.M
- Area & Perimeter (Square & Rectangle)
- Fractions, Decimals, BODMAS

- Percentage, Profit & Loss, Average
- Triangles (Equilateral, Isosceles, Scalene, Angle Property)
- Squares of a number from 2 to 35, Cubing from 1 to 15
- Integers (+, −, ×, ÷)
- Ratio & Proportion, Unitary Method
- Metric System
- Symmetry

Mock Paper - 1   SECTION - 1

1. 35210 less than 75634

= _____

(a) 44024   (b) 40224

(c) 40442   (d) 40424

2. 6785 more than 56789

= _____

(a) 63574   (b) 62574

(c) 65374   (d) 63474

3. (5246 – 1259) + (3127) = ___

(a) 7116   (b) 7104

(c) 7114   (d) 3987

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

A + B + C =

(a) 21   (b) 22

(c) 23   (d) 24

5. 2419 is _____ hundreds more than 1219.

(a) 1200   (b) 12

(c) 120   (d) 100

6.
$$
\begin{array}{r}
4\ 5\ 6 \\
\times\ \ 3\ 6\ 8 \\
\hline
\end{array}
$$

(a) 167708   (b) 166808

(c) 168707   (d) 167808

7. $18\overline{)9468}$

(a) 425   (b) 526

(c) 525   (d) 536

8. $\left(16\overline{)144}\right) + (14 \times 3) - \left(11\overline{)99}\right)$

= _____

(a) 53   (b) 48

(c) 43   (d) 42

9. $[9 \times 9] - [4 \times 17] - [9 \times 15]$

(a) –122   (b) 136

(c) –136   (d) 122

10. $\dfrac{48}{112} = \dfrac{3}{\square}$

The missing number is

(a) 9   (b) 6

(c) 7   (d) 8

11. $\dfrac{9}{8} \times \dfrac{4}{18}\ \ \dfrac{12}{9} = \dfrac{\square}{\square}$

(a) $\dfrac{1}{3}$ (b) $\dfrac{3}{16}$

(c) $\dfrac{16}{3}$ (d) $\dfrac{1}{16}$

12. $3\dfrac{2}{5} \times 45 =$ _____

(a) 136   (b) 157

(c) 143   (d) 153

13. (One third of 156) $- \left(\dfrac{1}{4} \text{ of } 324 \right)$

= _____

(a) –29   (b) –19

(c) 39   (d) 29

14. Square of 26 – Square of 17

= _____

(a) 81   (b) 285

(c) 390   (d) 387

15. Cube of 9 + Cube of 8 = ____

(a) 1342   (b) 1341

(c) 1241   (d) 1242

16. The sum of divisors of 48 is

_____

(a) 118   (b) 124

(c) 116   (d) 114

17. 9 l 375 ml = 2 l 820 ml + ____

(a) 6.555 l (b) 12.195 l

(c) 7.655 l (d) 7.250 ml

18. The next number in the series is _____

73, 102, 160, 276

(a) 510   (b) 506

(c) 508   (d) 518

19. $\sqrt{225} \div \sqrt{9}$ = _____

(a) 2   (b) 3

(c) 4   (d) 5

20. 4.5 – 19.682 + 32 = _____

(a) 16.818   (b) 16.808

(c) 16.881   (d) 16.819

SECTION - II

21. A – 4206 = 5523

A = B + 729

Find the value of B

(a) 9000 (b) 9100

(c) 8900 (d) 8500

22. $4[-21 + \{5 - 6(-7 - 3)\}] = $ _____

(a) 186 (b) 166

(c) 156 (d) 176

23. $[84 \div (-12)] \div [14 \times -4] = $ _____

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

(c) 7 (d) $\frac{1}{7}$

24. $7.84 \times 0.07 = $ _____

(a) 54.88 (b) 5.488

(c) 0.5488 (d) 0.05488

25. $11.2 \div 0.16 = $ _____

(a) 0.7 (b) 7

(c) 0.07 (d) 70

26. The L.C.M of 15, 18 and 24 is _____

(a) 360 (b) 260

(c) 216 (d) 316

27. The H.C.F of 12, 16, 23 is _____

(a) 0 (b) 2

(c) 1 (d) 23

28. The sum of all prime divisors of 180 is = _____

(a) 12 (b) 10

(c) 8 (d) 9

29. 24% of 750 = _____

(a) 180 (b) 160

(c) 190 (d) 170

30. In 7 innings Suresh scored 25, 37, 55, 3, 60, 42, 107. His average score is _____

(a) 51 (b) 49

(c) 46 (d) 47

31. 543 decalitre = _____ centilitre

(a) 543000 (b) 0.543

(c) 54.3 (d) 543000

32. $[5^2 + 7^2 + 11^2] - [\sqrt{576}] = $ _____

(a) 117 (b) 171

(c) 151 (d) 161

33. The measure of an angle is 32.5°. Find the measure of its complementary angle

(a) 57.5° (b) 58.5°

(c) 56.5° (d) 147.5°

34. The length of congruent sides of isosceles triangle is 14.7 cm and perimeter is 40 cm. The length of 3rd side is _____ cm

(a) 11.6　　　　　(b) 9.6

(c) 10.6　　　　　(d) 10.06

35. $3.5 - x + 4.05 = 6.005$, find the value of 'x'.

(a) 1.545　　　　(b) 1.095

(c) 1.6　　　　　(d) 2.095

36. Perimeter of rectangle = 170 m
Length = 50 m,
Breadth = ?

(a) 80 m　　　　(b) 35 m

(c) 55 m　　　　(d) 60 m

37. Write the algebraic expression for the statement, 6 less than the quotient of x and 3 equals 2.

(a) $6 - \dfrac{x}{3} = 2$　　　(b) $\dfrac{x}{3} - 6 = 2$

(c) $3x - 6 = 2$　　　(d) $\dfrac{x}{3} - 6 = 2$

38. If ₹760 is divided between Ramesh & Suresh in the ratio 8:11, what is Suresh's share ?

(a) ₹440　　　　(b) ₹320

(c) ₹552.5　　　(d) ₹420

39. Which of the following is the Roman numeral for the number obtained when 143 is multiplied by 13 ?
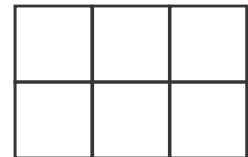
(a) MDCCCLX　　　(b) MDCCCLXI

(c) MDCCCLIX　　　(d) MDCCLIX

40. How many lines of symmetry does the given figure have ?
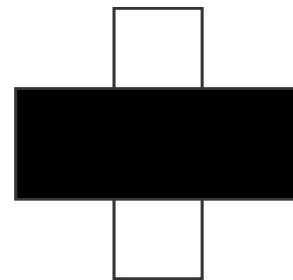
(a) 0　　　　　(b) 1

(c) 2　　　　　(d) 4

SECTION - III

41. A car travels 81 km in 3 hours. What is the distance that it travels in 5 hours ?

(a) 27 km   (b) 135 km   (c) 153 km   (d) 125 km

42. Area of a square is 625 m². Find its perimeter ?

(a) 125 m   (b) 120 m   (c) 80 m   (d) 100 m

43. A square table seat 8 people with 2 persons on each side. If 20 such tables are put end to end in a row, how many people can be seated ?

(a) 84   (b) 48   (c) 74   (d) 88

44. Rope X is 23.2 m long

Rope Y is $\dfrac{3}{4}$ of Rope X.

Rope Z is $\dfrac{1}{6}$ the length of Rope Y.

Find the total length of the 3 ropes in metres

(a) 43.05 m   (b) 43m   (c) 43.5 m   (d) 43.55 m

45. $(0.74 + 0.46) \times (0.07 - 0.5 + 0.59) = ?$

(a) 192   (b) 0.192   (c) 1.92   (d) 0.0192

46. The figure shown is made up of similar small squares. If the area of the figure is 216 cm², then its perimeter is _____

(a) 56 cm

(b) 6 cm

(c) 120 cm

(d) 60 cm

47. $\dfrac{\sqrt{m} + 6}{4} = 11 - 4$, find the value of m

(a) 484   (b) 22   (c) 441   (d) 24

48. Kiran has scored 85 marks in his English test, but he has the same score for his History and Maths paper. If his average score for 3 subjects is 87 marks. What score does he get for the Maths test ?

(a) 85   (b) 86   (c) 87   (d) 88

49. In the given figure ABCD is a rectangle and PQRS is a square. Find the area of the shaded portion.

(a) 219 cm²   (b) 290 cm²   (c) 290 cm   (d) 219 cm

50. Mohan read $\dfrac{1}{4}^{\text{th}}$ of a book. If he read further 91 pages, he would have read $\dfrac{3}{5}^{\text{th}}$ of the book. How many pages were there in the book ?

(a) 260   (b) 206   (c) 216   (d) 264

Mock Paper - 2   Section - 1

1. 45673 less than 83473

= _____

(a) 38800   (b) 36800

(c) 38700   (d) 37800

2. 5798 more than 37429

= _____

(a) 43227   (b) 42327

(c) 41227   (d) 42227

3. (6721 − 1234) + (2987)

= _____

(a) 8274   (b) 8374

(c) 8375   (d) 8474

4.
$$
\begin{array}{r}
5\;\boxed{B}\;3\;9 \\
+\;\;3\;7\;\boxed{C}\;4 \\
\hline
\boxed{A}\;2\;0\;3 \\
\hline
\end{array}
$$

A + B + C =

(a) 18   (b) 17

(c) 21   (d) 19

5. 3781 is _____ hundreds more than 1681.

(a) 19   (b) 22

(c) 21   (d) 23

6.
$$
\begin{array}{r}
3\;7\;4 \\
\times\;\;6\;4\;7 \\
\hline
\underline{}
\end{array}
$$

(a) 231978   (b) 240978

(c) 214978   (d) 241978

7. $23\overline{)5382}$

(a) 238   (b) 134

(c) 234   (d) 236

8. $\left(19\overline{)133}\right) + (17 \times 5) - \left(12\overline{)84}\right)$

= _____

(a) 65   (b) 75

(c) 95   (d) 85

9. $[7 \times 8] - [16 \times 7] - [8 \times 14]$

(a) −168   (b) −158

(c) 158   (d) 168

10. $\dfrac{36}{132} = \dfrac{\square}{22}$

The missing number is

(a) 6   (b) 5

(c) 4   (d) 3

11. $\dfrac{7}{9} \times \dfrac{36}{28} \quad \dfrac{6}{5} = \dfrac{\square}{\square}$

(a) $\dfrac{6}{5}$ (b) $\dfrac{5}{6}$

(c) $\dfrac{4}{7}$ (d) $\dfrac{7}{6}$

12. $4\dfrac{3}{7} \times 77 =$ _____

(a) 141   (b) 241

(c) 341   (d) 441

13. (One fifth of 175) – (Quarter of 436) = _____
- (a) 74
- (b) –64
- (c) –54
- (d) –74

14. Square of 24 + Square of 14 = _____
- (a) 752
- (b) 772
- (c) 762
- (d) 712

15. Cube of 9 – Cube of 11 = _____
- (a) –702
- (b) 602
- (c) –602
- (d) 502

16. The sum of divisors of 56 is _____
- (a) 120
- (b) 130
- (c) 140
- (d) 110

17. 11 kg 438 g = ____ + 3 kg 147 g
- (a) 8.091 kg
- (b) 8.391 kg
- (c) 8.191 kg
- (d) 8.291 kg

18. The next number in the series is _____
87, 124, 198, 346, _____
- (a) 632
- (b) 652
- (c) 602
- (d) 642

19. $\sqrt{324} \div \sqrt{36}$ = _____
- (a) 2
- (b) 3
- (c) 4
- (d) 1

20. 17.6 + 36.42 – 39 = _____
- (a) 1.52
- (b) 15.2
- (c) 15.02
- (d) 15.002

SECTION - 2

21. $A - 3679 = 2419$

$A = B + 861$

Find the value of B

(a) 5237   (b) 5137

(c) 5037   (d) 5337

22. $5[-11 + \{9 - 7(-13 - 3)\}] =$ ___

(a) 115   (b) –550

(c) 550   (d) –115

23. $[91 \div (-13)] \div [-17 \times -7] =$ ____

(a) $\dfrac{1}{17}$ (b) 17

(c) 7   (d) $-\dfrac{1}{17}$

24. $0.198 \times 1.9 =$ _____

(a) 0.3762   (b) 0.3672

(c) 3.762   (d) 37.62

25. $0.144 \div 2.4 =$ _____

(a) 0.66   (b) 0.6

(c) 0.06   (d) 0.006

26. The L.C.M of 16, 28 , 32 is _____

(a) 204   (b) 214

(c) 234   (d) 224

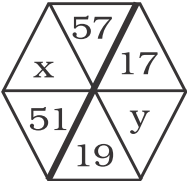**27.** The H.C.F of 14, 21, 49 is _____

(a) 9   (b) 6

(c) 5   (d) 7

28. The sum of all prime divisors of 220 is ____

(a) 22   (b) 16

(c) 18   (d) 20

29. 35% of 680 = _____

(a) 218   (b) 228

(c) 238   (d) 248

30. In 6 innings Ramesh scored 36, 72, 90, 4, 0, 14. His average score is _____

(a) 26   (b) 24

(c) 46   (d) 36

31. 739 decimetre = ____ kilometre

(a) 0.0793   (b) 0.00793

(c) 7.93   (d) 0.793

32. $[9^2 - 6^2 + 13^2] - [\sqrt{625}] =$ ___

(a) 169   (b) 189

(c) 199   (d) 179

33. The measure of an angle is $\left(47\dfrac{1}{4}\right)^\circ$. Find the measure of its supplementary angle

(a) $\left(134\dfrac{3}{4}\right)^\circ$ (b) $\left(131\dfrac{4}{3}\right)^\circ$

(c) 132.75°   (d) 133.25°

34. The length of congruent sides of isosceles triangle is 27.9 cm and perimeter is 66.5 cm. The length of 3rd side is __ cm

(a) 10.7   (b) 11.7

(c) 12.7   (d) 9.7

35. $14.6 - y + 9.08 = 16.07$, find the value of 'y'.

(a) −7.61   (b) 8.31

(c) −8.31   (d) 7.61

36. Perimeter of square = 154 cm its each side = _____ cm

(a) 36.5   (b) 28.5

(c) 38.5   (d) 35.5

37. Write an algebraic expression for the statement, product of x and 7 subtracted from Twelve.

(a) $12 + 7x$ (b) $12 - 7x$

(c) $7x - 12$ (d) $5x$

38. If ₹ 1080 is divided between Vikas & Akash in the ratio 7 : 8, what is Vikas share ?

(a) ₹504   (b) ₹576

(c) ₹514   (d) ₹566

39. Which of the following is the Roman numeral for the number obtained when 768 is added to 1729 ?

(a) MMCDXCVI   (b) MMXCVII

(c) MMCDXCVII   (d) MMCDVII

40. How many lines of symmetry does letter **M** has ?

(a) 2   (b) 1

(c) 3   (d) 4

SECTION - 3

41. In a group of 128 pupils, $\dfrac{3}{8}$ of them wear glasses. Of these $\dfrac{1}{4}$ were girls and rest are boys. How many boys in a group wearing glasses ?

(a) 24   (b) 48   (c) 12   (d) 36

42. The expenses for maintenance of a Goat, Cow and a Horse are in the ratio 1 : 5 : 7. If the total expenses are ₹1560, then find the expenses for maintenance of a Cow ?

(a) ₹600   (b) ₹840   (c) ₹120   (d) ₹650

43. The length of a rectangle is twice its breadth and the area of rectangle is 98 sq m. What is the length of rectangle ?

(a) 7   (b) 14   (c) 8   (d) 16

44. Find the value of $\sqrt{39 - \sqrt{(14 \quad 2)} + \sqrt{4}}$ = ?

(a) 5   (b) 7   (c) 6   (d) 4

45. The average of given numbers 13, 17, 19 , ☆ ,29 is 20. Find the number in place of ☆.

(a) 22   (b) 23   (c) 25   (d) 27

46. Solve : [167 + 2{23 × (–3) – 7 (48 ÷ 3 – 14)}]

(a) 0   (b) 1   (c) 2   (d) –1

47. Angles of a triangle have measures $(x + 40)°$, $(2x + 20)°$ and $(3x)°$. The triangle is _____

(a) scalence   (b) right   (c) equilateral   (d) Isosceles

48. Sum of 10% of 330 and 20% of 75 subtracted from 25% of 208 is
_____ ?

(a) 100   (b) 4   (c) –4   (d) 3

49. A dealer buys a wrist watch for ₹2025 and spends ₹175 on its
repairs. If he sells the same for ₹2596, then his profit percent is

(a) 18%   (b) 28%   (c) 16%   (d) 8%

50. A typist can type 400 words in half an hour. The number of words
typed in 24 minutes is _____?

(a) 160   (b) 640   (c) 320   (d) 420

Extra Practice Questions

1. If a = 3, b = 2 and c = –4, find the value of $3ab - 2b^2 + 4abc$?

(a) 86   (b) –76   (c) 76   (d) –86

2. A picture is 60 cm wide and 1.8 m long. The ratio of its width to its perimeter in lowest form is _____?

(a) 1 : 2   (b) 1 : 3   (c) 1 : 6   (d) 1 : 8

3. 252 kg of apples are to be packed in bags of 5kg and 2kg. If the same number of 5 kg and 2 kg bags are to be used, how many bags will be required in all ?

(a) 36 bags   (b) 54 bags   (c) 72 bags   (d) 104 bags

4. A shephard has some Goats and Sheeps. The total number of Goats and Sheeps he has is 105. Which of the following cannot be the ratio of the number of Goats to the number of Sheeps ?

(a) 1 : 5   (b) 1 : 4   (c) 10 : 11   (d) 2 : 5

5. In the given diagram, numbers into the opposite triangles are related in the same way. Which of the below equations shows relationship between x and y ?

(a) x + 3 = y   (b) x = 3 × y

(c) x = y + 2   (d) none of these

(diagram: hexagon with triangles containing 57, x, 17, 51, y, 19)

6. Divide 0.42 by 2.8?

(a) 0.0015   (b) 15   (c) 0.015   (d) 0.15

7. 9.6 ÷ 12 + 0.32 × 10 – 1.1 = _____

(a) 2.77   (b) 2.9   (c) 3.5   (d) 5.1

8. The square plot has a side 80 m long. Find the cost of levelling it at ₹6.50 per sq.metre ?

(a) ₹ 0.4160   (b) ₹ 41.60   (c) ₹ 41600   (d) ₹ 4160

9. What is the 6th term of the sequence shown ?

80, 40, 20, ____, ____,____

(a) 1   (b) 5   (c) $1\dfrac{1}{4}$ (d) $2\dfrac{1}{2}$

10. Find the difference of the greatest and least numbers of five digits formed by using 0, 1, 2, 3 and 4 only once.

(a) 30870   (b) 30906   (c) 31176   (d) 32976

11. Which of the following expression is correct.

(a) $7 \div 7 + 7 \times 7 = 50$ (b) $7 + 7 \div 7 \times 7 = 50$

(c) $7 \times 7 \div 7 + 7 = 50$ (d) $7 - 7 \times 7 + 7 = 50$

12. If two complementary angles are in the ratio 4 : 5. Find the smaller one.

(a) 40°   (b) 50°   (c) 80°   (d) 100°

13. Simplify : $5\dfrac{1}{2} - \left\{\dfrac{2}{5} \text{of} \dfrac{5}{6} + \left(\dfrac{7}{8} \quad 1\dfrac{3}{4}\right)\right\}$

(a) $4\dfrac{1}{3}$ (b) $4\dfrac{2}{3}$ (c) $5\dfrac{1}{3}$ (d) $5\dfrac{2}{3}$

14. Mr. Raja travels 390 km in 6 hours. How long will he take to travel 260 km ?

(a) 5 hrs   (b) 4.5 hrs   (c) 4 hrs   (d) 3.5 hrs

15. The ratio of the height of Mita and Nita is 5 : 6. If Nita is 1.2 m tall, then the height of Mita is _____?

(a) 1.8 m   (b) 1.0 m   (c) 1.5 m   (d) 2.4 m

16. In an office 20 clerks get a salary of ₹2500 each and 10 officers get a salary of ₹4000 each. The average salary of the employees in the office is _____?

(a) ₹2800   (b) ₹3000   (c) ₹3200   (d) ₹3600

17. A + B = 3600, B + C = 2800

B = 3 times of C, Find the value of A.

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

18. 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) 4   (c) 8   (d) 12

19. Ajay spent ₹ 208 for 4 notebooks and 6 pens, if cost of a notebook is ₹ 25. Find cost of 10 pens?

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

20. 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	₹ 60 per hour
After 4.00 pm	₹ 90 per hour

(a) ₹ 286.5   (b) ₹ 525   (c) ₹ 465.0   (d) ₹ 46.5

21. ₹ 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

22. 20% of 90 + 15% of 70 + 25% of 900 = _____

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

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

(a) 3644   (b) 6889   (c) 3049   (d) 5675

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

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

25. 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

26. Find the 20th term in the number sequence. 1, 4, 7, 10, ...

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

27. 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

28. 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 the mass of Box B if mass of box C is 10 kg?

(a) 42   (b) 58   (c) 40   (d) 44

29. Study the figure below carefully and find the perimeter of the figure.
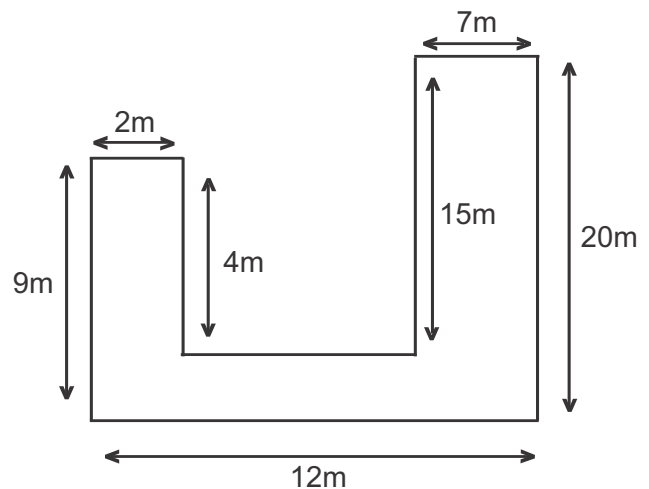
(a) 69 m   (b) 71 m   (c) 72 m   (d) 83 m

30. 1st January 2002, was Thursday. Which day of the week will be 21st March in that year.

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

Answer Sheet

Mock paper – 1

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

Mock paper – 2

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

Extra Practice Question Paper
(Section – 3)

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

SECTION 3 (Solutions)

Mock Paper - 1

41)
$$
\begin{array}{cc}
\text{km} & \text{hrs} \\
81 & 3 \\
x & 5
\end{array}
$$
∴ Do cross multiplication

∴ $\dfrac{81 \times 5}{3}$ = 135 km

42) Area = 625 m², side = ?

∴ Area = (side)²

∴ side = $\sqrt{\text{Area}}$

= $\sqrt{625}$ = 25 m

∴ perimeter = 4 × side

= 4 × 25 = 100 m

43) A square table can seat 4 people with 2 persons on each side.
No. of tables = 20
All tables are joined end to end
∴ on 1ˢᵗ and 20ᵗʰ table each 6 people can be seated, so total, 6 × 2 = 12 people
From table 2ⁿᵈ to table 19ᵗʰ, each 4 people can be seated,
so, total, 18 × 4 = 72 people
Now total number of people will be
12 + 72 = 84

44) X = 23.2 m

Y = $\dfrac{3}{4}$ × 23.2 = 17.4 m

Z = $\dfrac{1}{6}$ × 17.4 = 2.9 m

∴ X + Y + Z = 23.2 + 17.4 + 2.9
= 43.5 m

45) (0.74 + 0.46) × (0.07 − 0.5 + 0.59)
1.2 × 0.16 = 0.192

46) A (whole figure) = 216 cm²
Figure is divided into 6 equal squares.
∴ A (each square) = 216 ÷ 6
= 36 cm²
∴ Each side of smaller squares
= $\sqrt{36}$ = 6 cm
∴ Length of whole figure = 6 + 6 + 6 = 18 cm
Breadth of whole figure = 6 + 6 = 12 cm
∴ Perimeter = 2 (l + b)
= 2(18 + 12) = 2 × 30
= 60 cm

47) $\dfrac{\sqrt{m}+6}{4}$ = 11 − 4

∴ $\dfrac{\sqrt{m}+6}{4}$ = 7

∴ $\sqrt{m}$ + 6 = 7 × 4

∴ $\sqrt{m}$ + 6 = 28

∴ $\sqrt{m}$ = 28 − 6

∴ $\sqrt{m}$ = 22

∴ m = 22² = 484

48) Average of 3 subjects = 87 marks
∴ Total marks = 87 × 3 = 261
∴ Marks scored in English = 85
∴ (History + Maths) marks = 261 − 85
= 176
∴ Score in Maths test = 176 ÷ 2
= 88 marks

49) A (ABCD) = Length × Breadth
= 27 × 18 = 486 cm²
A(PQRS) = (side)²
= (14)² = 196 cm²
∴ A (shaded part) = 484 − 196
= 290 cm²

50) Mohan read $\dfrac{1}{4}^{\text{th}}$ of the book

∴ if he read further 91 pages, $\dfrac{3}{5}^{\text{th}}$ of book would be read.

means, difference of $\dfrac{1}{4}$ & $\dfrac{3}{5}$ is 91

so, $\dfrac{3}{5} - \dfrac{1}{4}$ (find LCM of denominators)

= $\dfrac{3 \times 4}{5 \times 4} - \dfrac{1 \times 5}{4 \times 5}$

= $\dfrac{12 - 5}{20}$ = $\dfrac{7}{20}$

Let total number of pages be x

$\dfrac{7}{20}$ of total pages = 91

∴ $\dfrac{7}{20}$ × x = 91

∴ x = $\dfrac{91 \times 20}{7}$ = 260

Mock Paper - 2

41) Total number of pupils = 128

pupils wearing glasses = $\dfrac{3}{8}$ × 128
= 48

No. of girls wearing glasses = $\dfrac{1}{4}$ × 48 = 12

∴ No of boys = 48 − 12 = 36

42)
$$
\begin{array}{ccccc}
\text{Goat} & : & \text{Cow} & : & \text{Horse} \\
1 & : & 5 & : & 7
\end{array}
$$
sum of ratio's = 5 + 7 + 1 = 13
Total expenses = ₹1560
Maintenance expenses of Cow

= $\dfrac{5}{13}$ × 1560 = ₹600

43) Let Breadth be x m

$\therefore$ Length $= 2x$ m

Area $= 98$ m²

$\therefore$ Area $=$ Length × Breadth

$98 = 2x × x$

$98 = 2x^2$

$\dfrac{98}{2} = x^2$

$\therefore 49 = x^2$

$\therefore x = \sqrt{49} = 7$ m

$\therefore$ Length $= 2x = 2 × 7 = 14$ m

44) $\sqrt{39 - \sqrt{(14 \quad 2)} + \sqrt{4}}$

Always first solve the smallest square root

so, $\sqrt{39 - \sqrt{(14 \; 2)} + 2}$

$\therefore \sqrt{39 - \sqrt{7 + 2}}$

$\therefore \sqrt{39 - \sqrt{9}}$

$\sqrt{39 - 3}$

$\therefore \sqrt{36} = 6$

45) Average $= 20$

$\therefore$ Average $= \dfrac{\text{Total sum}}{\text{Total number}}$

$20 = \dfrac{13 + 17 + 19 + ☆ + 29}{5}$

$\therefore 20 × 5 = 78 + ☆$

$100 - 78 = ☆$

$22 = ☆$

46) $[167 + 2\{23 × (–3) – 7 (48 ÷ 3 – 14)\}]$

use BODMAS

$\therefore [167 + 2\{23 × (–3) – 7 (16 – 14)\}]$

$\therefore [167 + 2\{23 × (–3) –7 × 2\}]$

$\therefore [167 + 2\{–69 – 14\}]$

$\therefore [167 + 2 × (–83)]$

$\therefore [167 – 166]$

$\therefore 1$

47) All angles of a triangle add upto 180°

$\therefore (x + 40) + (2x + 20) + 3x = 180$

$\therefore x + 40 + 2x + 20 + 3x = 180$

$\therefore 6x + 60 = 180$

$\therefore 6x = 180 – 60$

$\therefore 6x = 120$

$\therefore x = 120 ÷ 6 = 20°$

Angles of the triangle are,

$x + 40 = 20 + 40 = 60°$;

$2x + 20 = 2 × 20 + 20 = 40 + 20 = 60°$

$3x = 3 × 20 = 60°$

so its an Equilateral triangle

48) 10% of 330 $= 33$

20% of 75 $= 15$

25% of 208 $= 52$

Now, $52 – (33 + 15)$

$52 – 48 = 4$

49) Cost price $= ₹2025$

repairs cost $= ₹175$

$\therefore$ Actual cost price $= 2025 + 175$

$= ₹ 2200$

selling price $= ₹2596$

$\therefore$ profit $=$ S.P – C.P

$= 2596 – 2200$

$= ₹ 396$

$\therefore$ Profit % $= \dfrac{\text{profit}}{\text{cost price}} × 100$

$= \dfrac{396}{2200} × 100 = 18\%$

50) Half an hour = 30 minutes

Words	Time (mins)
400	30
x	24

$\therefore x = \dfrac{400 × 24}{30} = 320$

Extra Practice Questions

1) $a = 3$, $b = 2$ and $c = –4$

$3ab – 2b^2 + 4abc$

$= (3 × 3 × 3) – (2 × 2 × 2) + (4 × 3 × 2 × –4)$

$= 18 – 8 + (–96)$

$= 18 – 8 – 96 = – 86$

2) Breadth = 60cm, Length $= 1.8$ m $= 1.8 × 100$

$= 180$ cm

Perimeter $= 2(l + b)$

$= 2(180 + 60)$

$= 2 × 240 = 480$ cm

Breadth : Perimeter $= 60 : 480$

$= \dfrac{60}{480} = \dfrac{1}{8} = 1 : 8$

3) Total Apples = 252 kg

Two bags, 5 kg and 2kg

Add 5 kg and 2 kg $= 7$ kg

Now, $252 ÷ 7 = 36$ bags

So, 36 bags each of 5 kg and 2 kg

so, total bags $= 36 + 36 = 72$

4) Total number of Goats and Sheeps $= 105$

$\therefore 1 : 5$ cannot be the ratio of Goat : Sheep

As sum of ratio is $1 + 5 = 6$ and, $\dfrac{1}{6} × 105$ is not

exactly divisible.

Rest other 3 options are exactly divisible

So, correct option is (a)

5) Its a relation,

$57 = 3 × 19$

$51 = 3 × 17$

$x = 3 × y$

option (b) is correct

6) $0.42 ÷ 2.8$

remove decimal point from the denominator

$\dfrac{0.42 × 10}{2.8 × 10} = \dfrac{4.2}{28}$

$= 0.15$

7)   9.6 ÷ 12 + 0.32 × 10 – 1.1
     = 0.8 + 0.32 × 10 – 1.1
     = 0.8 + 3.2 – 1.1
     = 2.9

8)   Side of square plot   = 80 m
     Cost of levelling per m²   = ₹6.50
     first, find Area
     Area   = (side)²
             = (80)² = 6400 m²
     Total Cost = 6400 × 6.50
             = ₹41600

9)   Each successor number is half of the other so,

     80, 40, 20, <u>10</u>, <u>5</u>, $2\frac{1}{2}$

     correct answer is option (d)

10)   Given digits   = 0, 1, 2, 3, 4
     Greatest number =   4 3 2 1 0
     Smallest number = (–) 1 0 2 3 4
     Their difference   <u>3 2 9 7 6</u>

11)   Option (a) is correct as,
     7 ÷ 7 + 7 × 7 = 50
         1 + 49   = 50
            50   = 50

12)   When two angles add upto 90°, those are complementary angles.
     sum of the ratio = 4 + 5 = 9

     smallest angle = $\frac{4}{9}$ × 90 = 40°

13)   Use BODMAS,

$$5\frac{1}{2} - \left\{ \frac{2}{5} \text{ of } \frac{5}{6} + \left(\frac{7}{8} \quad 1\frac{3}{4} \right) \right\}$$

$$= \frac{11}{2} - \left\{ \frac{2}{5} \text{ of } \frac{5}{6} + \left(\frac{7}{8} \quad \frac{7}{4} \right) \right\}$$

$$= \frac{11}{2} - \left\{ \frac{2}{5} \text{ of } \frac{5}{6} + \left(\frac{\cancel{7}^1}{\cancel{8}_2} \times \frac{\cancel{4}^1}{\cancel{7}_1} \right) \right\}$$

$$= \frac{11}{2} - \left\{ \frac{\cancel{2}^1}{\cancel{5}_1} \text{ of } \frac{\cancel{5}^1}{\cancel{6}_3} + \frac{1}{2} \right\}$$

$$= \frac{11}{2} - \left\{ \frac{1}{3} + \frac{1}{2} \right\}$$

$$= \frac{11}{2} - \left\{ \frac{1 \times 2}{3 \times 2} + \frac{1 \times 3}{2 \times 3} \right\}$$

$$= \frac{11}{2} - \left\{ \frac{2 + 3}{6} \right\}$$

$$= \frac{11}{2} - \frac{5}{6}$$

$$= \frac{11 \times 3}{2 \times 3} - \frac{5}{6}$$

$$= \frac{33 - 5}{6} = \frac{\cancel{28}^{14}}{\cancel{6}_3} = \frac{14}{3} = 4\frac{2}{3}$$

14)
Km	Hrs
390	6
260	x

     $\therefore$ x = $\frac{260 \times 6}{390}$ = 4 hrs

15)
Mita	Nita
5	6
x	1.2

     $\therefore$ x = $\frac{5 \times 1.2}{6}$ = 1 m

16)   20 clerks, ₹2500 each
     $\therefore$ Total amount   = 20 × 2500
                    = ₹ 50000
     10 offiers, ₹4000 each
     $\therefore$ Total amount   = 10 × 4000
                    = ₹ 40000
     $\therefore$ Total amount   = 50000 + 40000
                    = ₹ 90000
     $\therefore$ Total number   = 20 clerk + 10 offices
                    = 30 pupils

     Average   = $\frac{\text{Total sum}}{\text{Total number}}$

             = $\frac{90000}{30}$ = ₹3000

17)   B = 3C
         B + C   =   2800

     $\therefore$ 3C + C   =   2800
               4C   =   2800
               C   =   2800 ÷ 4 = 700
               B   =   2800 – 700
               B   =   2100
        A + B   =   3600
               A   =   3600 – 2100
               A   =   1500

18)   At the end,
     Jason   8
     Kent   8
     In the beginning
     Jason   8 + 4   =   12
     Kent   8 – 4   =   4

19)   1 notebook   =   25
     4 notebooks   =   25 × 4   =   100
     4 notebooks and 6 pens   =   208
     $\therefore$ 6 pens   =   208 – 100
                         =   108
     $\therefore$ 1 pen   =   108 ÷ 6
                         =   18
     Cost of 10 pens = 18×10   =   180

20)   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

         = $(5\frac{1}{2} \times 60) + (1\frac{1}{2} \times 90)$
         =   330 + 135
         =   465

21) Sarika $\dfrac{1}{6} \times 36 = ₹ 6$

Amita $6 + \dfrac{1}{3} \times 6$

$= 6 + 2$
$= ₹ 8$

Mayuri $= 36 - (6 + 8)$
$= ₹ 22$

22) $\dfrac{20}{100} \times 90 + \dfrac{15}{100} \times 70 + \dfrac{25}{100} \times 900$

$= 18 + 10.5 + 225$
$= 253.5$

23) $\sqrt{6889} = 83$

24) Cost of $\dfrac{1}{2}$ kg sugar $= ₹ 16$

Cost of 1 kg sugar $= 16 \times 2$
$= ₹ 32$

Cost of 5 kg sugar $= 5 \times 32$
$= ₹ 160$

Cost of $\dfrac{1}{4}$ kg tea powder $= ₹ 50$

$\therefore$ Cost of 1 kg tea powder

$= 4 \times 50$
$= ₹ 200$

$\therefore$ Cost of 2 kg tea powder $= 2 \times 200$
$= ₹ 400$

Total cost $= 160 + 400$
$= ₹ 560$

25) 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.

26) 1, 4, 7, 10 ....
difference of 3 between each consecutive term.
20th term $= 1 + 19 \times 3$
$= 1 + 57$
$= 58$

27) 38 shirts $= 7$ sets of 5 shirts + 1 set of 3 shirts

$\therefore$ Amount paid for 38 shirts
$= (7 \times 900) + (1 \times 675)$
$= 6300 + 675$
$= 6975$

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

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

30) Excluding 1st January
No. of days in January $= 30$
No. of days in February $= 28$
No. of days till 21st March $= 21$
Total $= 79$ days
$79 \div 7$ gives remainder 2
2nd day after Thursday is 'Saturday'.

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