MENTAL MATHS COMPETITION

: Organised by :

GLOBAL MATHS SCIENCE EDUCATION®

in association with **Math Vision PTE Ltd., Singapore**

MOCK TEST

Name : _____

School : _____ Std. : **7**

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 35)
- 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 40, Cubing from 1 to 20
- Integers (+, –, ×, ÷)
- Ratio & Proportion, Unitary Method

Mock Paper - 1 Section - 1

1. $(38 \times 12) + (38 \times 48) =$ _____

(a) 2180 (b) 2280

(c) 2270 (d) 2260

2. $(65 \times 3) + (81 \times 4) - (36 \times 5)$ = _____

(a) 719 (b) 829

(c) 339 (d) 429

3. (25% of 164) + (50% of 198) = _____

(a) 135 (b) 130

(c) 150 (d) 140

4. (half of 280) – (one third of 120) = _____

(a) 180 (b) 100

(c) 160 (d) 120

5. square of 36 + square of 14 = _____

(a) 2028 (b) 1792

(c) 1592 (d) 1492

6. square of 30 + square of 20 – square of 15 = _____

(a) 1075 (b) 1065

(c) 1005 (d) 1035

7. square of 39 + cube root of 343 = _____

(a) 1258 (b) 1528

(c) 1529 (d) 1520

8. $\frac{3}{25}$ = _____

(a) 0.102 (b) 0.12

(c) 0.1012 (d) 0.121

9. The bridge A is 0.486 km and bridge B is 1.28 km long. Find difference between their length.

(a) 0.794 (b) 79.4

(c) 0.749 (d) 0.793

10. How do you write $\frac{5}{20}$ as percentage.

(a) 5% (b) 50%

(c) 40% (d) 25%

11. Average of 35, 37, 39, 41, 43 is _____

(a) 37 (b) 41

(c) 39 (d) 35

12. $297 + 103 = 40 \times \square$

(a) 10 (b) 20

(c) 15 (d) 12

13. $40 \times 2\frac{3}{4} = \square$

(a) 121 (b) 110

(c) 50 (d) 111

14. The sum of two integers is –9 if one of them is 4, find the other.

(a) 13 (b) –13

(c) 5 (d) –5

15. The sum of 1.8, 16.3 and 72.985 is _____

(a) 91.85 (b) 9108.5

(c) 91.085 (d) 9.1085

16. Sum of all the divisors of 45 = _____

(a) 60 (b) 78

(c) 70 (d) 40

17. If 335 is divided by 25, the remainder is _____

(a) 10 (b) 5

(c) 9 (d) 6

18. H.C.F. of 36, 72, 96 is ____

(a) 13 (b) 14

(c) 12 (d) 15

19. L.C.M. of 45, 36 and 72 is ___

(a) 360 (b) 320

(c) 180 (d) 350

20. The ratio of 45 min to 45 hour is _____

(a) 1 : 16 (b) 1 : 30

(c) 1 : 60 (d) 1 : 10

SECTION - II

21. $160 \times 10 \div (5 \times 4) =$ _____

(a) 40 (b) 100

(c) 60 (d) 80

22. $-2 + \square = -9$

(a) 7 (b) –7

(c) 11 (d) –11

23. $(15) \times (2) + (-4) \times (5) \div (-5)$

(a) 34 (b) –4

(c) 2 (d) –2

24. $\frac{288}{360} = \square$

(a) $\frac{4}{5}$ (b) $\frac{6}{5}$

(c) $\frac{5}{4}$ (d) $\frac{6}{7}$

25. $\frac{4}{5} \div \frac{6}{25} \times \frac{8}{15} = \square$

(a) $\frac{9}{16}$ (b) $\frac{16}{9}$

(c) $\frac{4}{3}$ (d) $\frac{3}{4}$

26. $10.35 \div 1.5 =$ _____

(a) 6.5 (b) 6.7

(c) 6.9 (d) 6.4

27. $35 : 70 :: 7 :$ _____

(a) 9 (b) 8

(c) 7 (d) 14

28. If 3 bags of Soyabeen seeds cost ₹2250. Find the cost of 7 such bags.

(a) 5200 (b) 5250

(c) 5300 (d) 5270

29. The perimeter of triangle is 55 cm, with one of its side as 15cm. If the other two sides are equal find their lengths.

(a) 25 cm (b) 20 cm

(c) 30 cm (d) 28 cm

30. The ratio of 3 meter : 60 cm is _____

(a) 5 : 1 (b) 4 : 1

(c) 1 : 5 (d) 1 : 4

31. $3t = 7t - 12$, $t =$ _____

(a) 0 (b) 1

(c) 2 (d) 3

32. Which of these numbers is equivalent to $\frac{9}{8}$

(a) $\frac{45}{32}$ (b) $\frac{45}{40}$

(c) $\frac{40}{45}$ (d) $\frac{32}{45}$

33. A boy's walking pace measures 60 cm. How many meter has he walked after taking 50 paces.

(a) 300 m (b) 30 m

(c) 3 m (d) 30000 cm

34. The area of hall is 60m². Its length is 8 m,find its perimeter.

(a) 31 m (b) 15.5 m

(c) 30 m (d) 15 m

35. Two sums of money are in the ratio 2 : 5, If the second sum is ₹95, the first sum is _____

(a) ₹ 28 (b) ₹ 21

(c) ₹ 42 (d) ₹ 38

36. $24 - [10 - \{3 - (1 - 4 - 6)\}] =$ ___

(a) 26 (b) 24

(c) 23 (d) 5

37. Value of x in $\frac{x}{4} + \frac{1}{2} = 4$

(a) 28 (b) –28

(c) 14 (d) –14

38. In $\frac{a}{8} + \frac{a}{4} = 6$, the value of 'a' is _____

(a) 122 (b) –16

(c) 16 (d) 0

39. Find the vertex angle of an isosceles triangle if its base angle is 75°

(a) 50° (b) 30°

(c) 25° (d) 115°

40. A sum of 3 consecutive odd numbers is 201, find the smallest of them?

(a) 69 (b) 67

(c) 65 (d) 63

SECTION - III

41. A car travels 579.6 km in 9 hours. Find the distance covered in 5 hours ?

(a) 64.40 km (b) 115.92 km (c) 322 km (d) 1043.28 km

42. In a library there were 5000 books. Out of this 675 books were discarded what percentage was discarded ?

(a) 8.5 % (b) 10% (c) 13.5 % (d) 15%

43. If x = 2, y = 1, z = 4 and a = 5, find the value of $\frac{xy}{z} - \frac{xy}{a}$?

(a) $\frac{3}{5}$ (b) $\frac{3}{10}$ (c) $\frac{1}{5}$ (d) $\frac{1}{10}$

44. $5\frac{1}{2} - \left[\frac{2}{5}\text{of}\left\{\frac{2}{5}\text{of}\frac{5}{6} + \left(\frac{7}{8} \div 1\frac{3}{4}\right)\right\}\right]$

(a) $4\frac{1}{3}$ (b) $4\frac{2}{3}$ (c) $5\frac{1}{6}$ (d) $5\frac{2}{3}$

45. A square & a rectangular plot of land have same perimeter. If the square is of side 60 cm & rectangle is of length 70 cm, then the area of the rectangle is

(a) 3500 cm² (b) 2800 cm² (c) 2500 cm² (d) 2200 cm²

46. Mrs. Monica spent $\frac{3}{5}$ of her money and 440 is left. How much did she have first

(a) ₹1600 (b) ₹960 (c) ₹1100 (d) ₹2000

47. In a triangle ABC, measure of ∠B is twice of measure of ∠A and measure of ∠C = 60°, find the measure of ∠A.

(a) 60° (b) 80° (c) 40° (d) 120°

48. $\dfrac{(0.3)(0.3)+0.6\times0.2+(0.2\times0.2)}{(0.3+0.2)} = ?$

(a) 0.6 (b) 0.5 (c) 0.05 (d) 6

49. $\sqrt{1+\dfrac{X}{144}} = \dfrac{13}{12}$ the value of X = $\square$

(a) 0 (b) 12 (c) 13 (d) 25

50. 10% of 24.2 will be how much more than 10% of 24.02 ?

(a) 0.02 (b) 0.18 (c) 0.018 (d) 0.002

Mock Paper - 2 Section - 1

1. $(43 \times 13) + (13 \times 7) =$ _____

(a) 725 (b) 745

(c) 650 (d) 675

2. $(53 \times 5) + (76 \times 2) - (32 \times 7)$ = _____

(a) 191 (b) 193

(c) 195 (d) 197

3. (25% of 192) – (50% of 92) = _____

(a) 6 (b) 0

(c) 2 (d) 4

4. (half of 460) + (one fifth of 120) = _____

(a) 254 (b) 272

(c) 264 (d) 276

5. Square of 42 – Square of 40 = _____

(a) 168 (b) 172

(c) 176 (d) 164

6. Square of 25 + Square of 15 – Square of 10 = _____

(a) 750 (b) 950

(c) 700 (d) 600

7. Square of 33 + cube root of 512 = _____

(a) 1067 (b) 1077

(c) 1177 (d) 1097

8. $\frac{7}{40}$ = _____

(a) 175 (b) 0.0175

(c) 0.175 (d) 0.75

9. The bridge A is 0.512 km and bridge B is 2.35 km long. Find the sum of their length.

(a) 2.862 (b) 1.838

(c) 18.38 (d) 28.62

10. How do you write $\frac{8}{25}$ as percentage.

(a) 16% (b) 25%

(c) 32% (d) 24%

11. Average of 33, 42, 43, 57, 65

(a) 56 (b) 54

(c) 48 (d) 46

12. $273 + 177 = 30 \times \square$

(a) 30 (b) 15

(c) 25 (d) 20

13. $1\frac{3}{7} \times 105 =$ _____

(a) 135 (b) 180

(c) 150 (d) 165

14. The sum of two integers is 15, if one of them is –5, find the other.

(a) 10 (b) 20

(c) –20 (d) –10

15. The sum of 1.6, 15.8 and 62.735 is _____

(a) 801.35 (b) 80.315

(c) 80.135 (d) 8.0135

16. Sum of all the divisors of 35 = _____

(a) 13 (b) 48

(c) 41 (d) 37

17. If 1065 is divided by 36, the remainder is _____

(a) 26 (b) 32

(c) 21 (d) 29

18. H.C.F. of 20, 30, 45 is _____

(a) 9 (b) 5

(c) 7 (d) 12

19 L.C.M. of 16, 24 and 32 = _____

(a) 56 (b) 48

(c) 72 (d) 96

20. The ratio of 35 min to 70 hours is _____

(a) 1 : 120 (b) 2 : 35

(c) 2 : 70 (d) 1 : 12

SECTION - 2

21. $180 + 105 \div (7 \times 5) =$ _____

(a) 136 (b) 165

(c) 183 (d) 145

22. $7 - \square = 17$

(a) 10 (b) –10

(c) –27 (d) 27

23. $(-6) \times 3 + (12 \times 4) \div (-8)$

(a) –24 (b) –36

(c) 36 (d) 24

24. $\frac{245}{315} = \square$

(a) $\frac{7}{9}$ (b) $\frac{9}{7}$

(c) $\frac{3}{7}$ (d) $\frac{7}{3}$

25. $\frac{8}{36} \times \frac{5}{2} \div \frac{15}{16} = \square$

(a) $\frac{5}{18}$ (b) $\frac{8}{27}$

(c) $\frac{7}{23}$ (d) $\frac{16}{27}$

26. $1.296 \div 0.18 =$ _____

(a) 0.72 (b) 7.2

(c) 72 (d) 0.072

27. 65 : ___ : : 5 : 7

(a) 65 (b) 53

(c) 91 (d) 13

28. If 13 bags of sugar cost ₹7345. Find the cost of 7 such bags.

(a) 3955 (b) 3355

(c) 3595 (d) 3535

29. The perimeter of a triangle is 75 cm with one of its side as 35 cm. If the other two sides are equal, find their lengths.

(a) 15 cm (b) 35 cm

(c) 20 cm (d) 40 cm

30. The ratio of 180cm : 6 metre is _____

(a) 5 : 9 (b) 3 : 10

(c) 10 : 3 (d) 9 : 5

31. $9t = 3t - 42$, $t =$ _____

(a) –7 (b) 9

(c) –9 (d) 7

32. Which of these numbers is equivalent to $\frac{7}{9}$.

(a) $\frac{161}{209}$ (b) $\frac{163}{207}$

(c) $\frac{161}{207}$ (d) $\frac{166}{219}$

33. A boy's walking pace measures 40 cm. How many metre has he walked after taking 60 paces.

(a) 24 m (b) 2400 cm

(c) 240 m (d) 2.4 m

34. The area of hall is 75 m². Its length is 15m. Find its perimeter.

(a) 35 m (b) 20 m

(c) 40 m (d) 45 m

35. Two sums of money are in the ratio 3 : 7, if the first sum is ₹51, the second sum is ___

(a) ₹119 (b) ₹68

(c)₹91 (d) ₹65

36. $36 - [45 - \{7 - (2 - 5 - 8)\}] =$ ___

(a) 63 (b) 11

(c) 13 (d) 9

37. Value of x in $\frac{x}{6} + \frac{2}{3} = 7$

(a) 46 (b) –38

(c) 38 (d) –46

38. If $\frac{a}{14} + \frac{a}{7} = 6$, the value of 'a' is _____

(a) 21 (b) 28

(c) 14 (d) 35

39. Find the base angles of an isosceles triangle it its vertex angle is 65°

(a) 32.5° (b) 115°

(c) 57.5° (d) 65°

40. A sum of 3 consecutive even numbers is 198, find the smallest of them ?

(a) 63 (b) 64

(c) 65 (d) 62

SECTION - 3

41. ₹ 4800 are distributed among A, B and C in the ratio of 6:5:4; the difference between the shares of A and C is _____

(a) ₹ 450 (b) ₹580 (c) ₹640 (d) ₹1260

42. 4 is added to a number and the sum is multiplied by 5, If 20 is subtracted from the product and the difference is divided by 8, the result is equal to 10. Find the number.

(a) 16 (b) 12 (c) 8 (d) 20

43. When 15 is added to $2\frac{1}{3}$ of a number, the answer is 4 times the number. Find the number.

(a) 7 (b) 8 (c) 9 (d) 10

44. In a series 2, 5, 8, 11, ... what will be 15^{th} term.

(a) 41 (b) 42 (c) 43 (d) 44

45. Mr. Ravi travels 390 km in 6 hrs. How long will he take to travel 0.65 km.

(a) 3.6 seconds (b) 36 seconds (c) 3.6 minutes (d) 36 minutes

46. Three times a number is 225 more than 50% of the same number. What is this number.

(a) 337.5 (b) 150 (c) 90 (d) 45.5

47. 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) 300 minutes (b) 3 hrs (c) 4 hrs (d) 3 & half hour

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

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

49. Mrs. Chang 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

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

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

Extra Practice Questions

1. Ved purchased following items from the supermarket 10 kg atta at ₹15 per kg; 2 kg moong dal at ₹ 32.50 per kg, 1 kg Udad dal at ₹ 43.50 per kg and 1 kg sugar at ₹ 14.50 per kg. How much did he pay to the cashier, if the cashier gave him ₹ 27 back?

(a) ₹ 165 (b) ₹ 235 (c) ₹ 273 (d) ₹ 300

2. Find the smallest number which on being divided by 20, 40, 60 and 75 leaves 18 as remainder.

(a) 5 (b) 23 (c) 600 (d) 618

3. Anil bought an old motor cycle for ₹15000 and spent ₹ 3000 for its repairs. For how much shall he sale it to earn profit of 10%?

(a) ₹16500 (b) ₹18000 (c) ₹19800 (d) ₹17500

4. To make 67 dresses 368.5 m of cloth was used. To make 75 dresses how much of the cloth will be required?

(a) 412.5 m (b) 411.5 m (c) 390 m (d) 395 m

5. $3[15.2 + \{(6.5 + 24.5) \times 2 + (7.8 - 2.3)\}] =$

(a) 155.1 (b) 248.1 (c) 310.2 (d) 333.1

6. Calculate the number of years, months and days between 7-8-1992 and 3-5-2006.

(a) 14Y-3M-4D (b) 14Y-8M-25D (c) 13Y-3M-4D (d) 13 Y-8M-25D

7. Robin, Anjum, Dhoni and Dyna are respectively 12 yrs 3 months, 13 years 9 months, 13 year 7 months and 12 years 9 months old. Find their average age.

(a) 12 yrs 6 months (b) 12 yrs 11 months

(c) 13 yrs 1 month (d) 13 yrs 3 months

8. There are 4800 books in a library. If 12.5% new books were purchased and 400 old books were discarded, how many books were left in the library?

(a) 600 (b) 4400 (c) 5000 (d) 5400

9. A boy is 25 yrs younger than his father. Three years ago, the boy's age was one-sixth of the age of his father, then present age of boy is

(a) 10 yrs (b) 6 yrs (c) 8 yrs (d) 4 yrs

10. If 96.5% of the students are present in the school & number of absent students is 42, find the total number of students in the school.

(a) 1050 (b) 1200 (c) 1680 (d) 4053

11. The cost of a wall clock is ₹ 360. Find the selling price if the gain is 15%.

(a) ₹ 54 (b) ₹ 306 (c) ₹ 414 (d) ₹ 423.50

12. The perimeter of a rectangular field is 240 m. If the length is 85 m, find its area.

(a) 2695 sqm (b) 2795 sqm (c) 2975 sqm (d) 29.75 sqm

13. During a sport day, there were 225 more boys than girls and there were 258 fewer teachers than girls. How many people were there altogether if there were 78 teachers?

(a) 561 (b) 975 (c) 957 (d) 560

14. A dinner of ₹1400 was shared by 6 people. If Mr. Shah paid ₹ 50 more than each of other people, how much did Mr. Shah pay?

(a) ₹ 225 (b) ₹ 275 (c) ₹ 250 (d) ₹ 300

15. 10 ball pens cost ₹ 75, how much do 2 dozens ball pens cost?

(a) ₹ 150 (b) ₹160 (c) ₹ 170 (d) ₹ 180

16. A kettle contains 5 *l* 500 m*l* of water. If the water is poured into four 1.25 *l* bottles, how much water is left in the Kettle?

(a) 450 m*l* (b) 750 m*l* (c) 1.25 m*l* (d) 500 m*l*

17. A Roll of paper 24 m long is placed in a fax machine. In every fax transmission received, the fax machine will use 30 cm of paper. What is the length of paper left if it receives 23 fax transmissions?

(a) 1870 cm (b) 1879 cm (c) 1710 cm (d) 1872 cm

18. If the circular playground with the radius 14 metre is levelled at rate of ₹ 50 per square metre. The total cost of levelling the ground is ₹ _____

(a) 15400 (b) 15600 (c) 30800 (d) 30600

19. A profit of ₹ 30,000 is to be distributed among Ena, Meena and Dika in the ratio of 3:5:7. What will be the difference between Meena's and Dika's amount?

(a) ₹ 1000 (b) ₹ 2000 (c) ₹ 3000 (d) ₹ 4000

20. The traffic signals lights at three different road crossing change after every 48 seconds, 72 seconds and 108 seconds respectively. If they all change simultaneously at 8.20 hours, then they will again change simultaneously at _____

(a) 8:27:12 hrs (b) 8:27:36 hrs (c) 8: 27: 48 hrs (d) 8: 27: 24 hrs

21. If 60% of the students in a school are boys and the girls number is 812. How many boys are there?

(a) 1624 (b) 406 (c) 1218 (d) 1416

22. $\frac{1}{3\times5}+\frac{1}{5\times7}+\frac{9+1}{3\times5\times7}=?$

(a) 10 (b) 0 (c) $\frac{8}{3\times5\times7}$ (d) $\frac{7}{3\times7}$

23. $\frac{36\times0.003\times0.0035}{0.63\times0.8}=?$

(a) 7.5 (b) 0.0075 (c) 0.00075 (d) 1.5

24. Kiran bought some toys at a discount of 20% on the original price. The original price of each toy is ₹ 400. If he makes total saving of ₹ 2400, How many toys did he buy ?

(a) 8 (b) 12 (c) 24 (d) 30

25. $\left[4\frac{1}{2}+(5\frac{1}{3}\times 3)\right]-2\frac{2}{3}$

(a) $\frac{107}{6}$ (b) $\frac{108}{6}$ (c) $\frac{105}{6}$ (d) $\frac{109}{6}$

26. A dealer wishes to make a profit of 25% by selling an article. At what price should he sell the article, if the cost price is ₹ 200 ?

(a) ₹ 220 (b) ₹ 225 (c) ₹ 250 (d) ₹ 150

27. The smallest number, which when subtracted from the sum of the squares of 11 and 12 gives a perfect square is _____.

(a) 4 (b) 9 (c) 15 (d) 40

28. Kishor walked $\frac{3}{8}$km to his school, he walked 250m to his friend Raghu's house. Then he walked 1/2 km back to his home. How far did he walk?

(a) $\frac{5}{14}$ km (b) $\frac{7}{8}$ km (c) $\frac{9}{8}$ km (d) $\frac{1}{8}$ km

29. When an article is sold for ₹ 36, the loss is 20% What is the cost price of the article ?

(a) ₹ 16 (b) ₹ 28.80 (c) ₹ 43.20 (d) ₹ 45

30. The perimeter of rectangle is 56 meter and length is 3 times of breadth. Find the area of Rectangle.

(a) 147 sqm (b) 587 sqm (c) 588 sqm (d) 148 sqm

Answer Sheet

Mock paper - 1

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

Mock paper - 2

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

Extra Practice Question Paper (Section - 3)

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

SECTION 3 (Solutions)

Mock Paper - 1

41) Speed $= \frac{\text{distance}}{\text{time}}$

$= \frac{579.6}{9}$

$= 64.4$ km/hr

distance covered in 5 hrs. $= 64.4 \times 5$

$= 322$ km

42) % of books discarded

$= \frac{675}{5000} \times 100$

$= 13.5\%$

43) $\frac{xy}{z} - \frac{xy}{a}$

$= \frac{(2)(1)}{4} - \frac{(2)(1)}{5}$

$= \frac{1}{2} - \frac{2}{5}$

$= \frac{5-4}{10}$

$= \frac{1}{10}$

44) $5\frac{1}{2} - \left[\frac{2}{5} \text{ of } \left\{\frac{2}{5} \text{ of } \frac{5}{6} + \left(\frac{7}{8} \div 1\frac{3}{4}\right)\right\}\right]$

$= \frac{11}{2} - \left[\frac{2}{5} \text{of} \left\{\frac{1}{3} + \left(\frac{7}{8} \div \frac{7}{4}\right)\right\}\right]$

$= \frac{11}{2} - \left[\frac{2}{5} \text{of} \left\{\frac{1}{3} + \left(\frac{7}{8} \times \frac{4}{7}\right)\right\}\right]$

$= \frac{11}{2} - \left[\frac{2}{5} \text{ of } \left\{\frac{1}{3} + \frac{1}{2}\right\}\right]$

$= \frac{11}{2} - \left[\frac{2}{5} \text{ of } \frac{2+3}{6}\right]$

$= \frac{11}{2} - \left[\frac{2}{5} \text{ of } \frac{5}{6}\right]$

$= \frac{11}{2} - \frac{1}{3}$

$= \frac{33-2}{6}$

$= \frac{31}{6}$

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

45) Perimeter of square = Perimeter of rectangle

$4(60) = 2(70 + x)$

$240 = 140 + 2x$

$2x = 100$

$x = 50$

Area of rectangle $= 50 \times 70$

$= 3500$ cm²

46) Mrs. Monica spent $\frac{3}{5}$

$\therefore$ Money left $= 1 - \frac{3}{5}$

$= \frac{2}{5}$

$\frac{2}{5}$ of her money $= 440$

$\therefore$ Total money at first $= 440 \div \frac{2}{5}$

$= 440 \times \frac{5}{2}$

$= 1100$

47) Let $m\angle A = x°$

$\therefore$ $m\angle B = 2x°$

$m\angle C = 60°$

$m\angle A + m\angle B + m\angle C = 180°$

$x + 2x + 60 = 180$

$3x + 60 = 180$

$3x = 180 - 60$

$3x = 120$

$x = \frac{120}{3}$ $\quad x = 40°$

$\therefore$ $m\angle A = 40°$

48) $\frac{(0.3)(0.3) + 0.6 \times 0.2 + (0.2 \times 0.2)}{(0.3 + 0.2)}$

$= \frac{(0.3)^2 + 2 \times 0.3 \times 0.2 + (0.2)^2}{(0.3 + 0.2)}$

$= \frac{(0.3 + 0.2)^2}{0.3 + 0.2}$ using $(a+b)^2 = a^2 + 2ab + b^2$

$= \frac{(0.5)^2}{0.5}$

$= 0.5$

49) $\sqrt{1 + \frac{x}{144}} = \frac{13}{12}$

$1 + \frac{x}{144} = \left(\frac{13}{12}\right)^2$

$\frac{144 + x}{144} = \frac{169}{144}$

$144 + x = 169$

$x = 169 - 144$

$x = 25$

50) 10% of 24.2 = $\frac{10}{100} \times 24.2 = 2.42$

10% of 24.02 = $\frac{10}{100} \times 24.02 = 2.402$

difference = 2.42
− 2.402
0.018

Mock Paper - 2

41) Let A = 6x B = 5x C = 4x

15 x = 4800, x = 320

A − C = 6x − 4x

= 2x

= 2(320) = ₹640

42) Let the number be x

$\therefore \frac{(x+4) \times 5 - 20}{8} = 10$

$\therefore$ 5x + 20 − 20 = 80

$\therefore$ x = 16

43) Let the number be x

$\frac{7}{3}x + 15 = 4x$

$4x - \frac{7x}{3} = 15$

5x = 45

x = 9

44) To get 4th term apply 3n − 1

$\therefore$ 15th term n = 15

$\therefore$ 3(15) − 1 = 45 − 1 = 44

45) km hr

390 6

0.65 ?

$= \frac{0.65 \times 6}{390} = 0.01$ hrs

= 0.01 × 3600 (1 hrs = 3600 seconds)

= 36 seconds

46) Let the no be x.

$3x = 225 + \frac{50}{100} x$

$3x = 225 + \frac{1}{2} x$

$3x = \frac{450+x}{2}$

6x = 450 + x

6x − x = 450

5x = 450

$x = \frac{450}{5} = 90$

47) 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.

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

49) 7406 − 668 = 6738
6738 ÷ 6 = 1123

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

Extra Practice Questions

1) Atta → 10 × 15 = 150
Moong dal → 2 × 32.5 = 65
Udad dal → 1 × 43.5 = 43.5
Sugar → 1 × 14.5 = 14.5
Total 273
He paid to cashier = 273 + 27
= ₹ 300

2) L.C.M. of 20, 40, 60 and 75 is 600.
Hence required number = 600 + 18
= 618

3) Total cost = 15000 + 3000
= 18000

cost price	selling price
100	110
18000	x

$x = \frac{18000 \times 110}{100}$
= 19800

4) Cloth required for 1 dress

$= \frac{368.5}{67}$

$= 5.5$ m

$\therefore$ Length of cloth required
$= 75 \times 5.5\text{m} = 412.5\text{m}.$

5) $3\ [15.2 + \{(16.5 + 24.5) \times 2 + (7.8 - 2.3)\}]$
$= 3\ [15.2 + \{31 \times 2 + 5.5\}]$
$= 3\ [15.2 + \{62 + 5.5\}]$
$= 3\ [15.2 + 67.5]$
$= 3\ [82.7]$
$= 248.1$

6) From 7 – 8 – 1992 till 7 – 8 – 2005 is 13 years.
Then till 7 – 4 – 2006 is 8 months
Then till 3 – 5 – 2006 is 25 days.
(Exclude the first & last date)

7) Average age $= \frac{\text{Total Sum}}{\text{Total Number}}$

$= \frac{(147 + 165 + 163 + 153)}{4}$ months

$= \frac{628}{4}$

$= 157$ months $= 13$ years 1 month.

8) No. of books = 4800

New books $= \frac{12.5}{100} \times 4800 = 600$

discarded old books = 400
No. of books left = 4800 + 600 – 400
= 5000

9) Present age of boy = x
Present age of father = x + 25
3 yrs ago,
age of boy = x – 3
age of father = x + 25 – 3
= x + 22

$x - 3 = \frac{1}{6}(x + 22)$

$6(x - 3) = x + 22$
$6x - 18 = x + 22$
$6x - x = 22 + 18$
$5x = 40$
$x = 8$

10) Present students = 96.5%
$\therefore$ Absent students = 100 – 96.5
= 3.5%

$\therefore \quad \frac{3.5}{100} \times x = 42 \qquad x = \frac{42 \times 100}{3.5}$

$x = 1200$

11)

C.P	S.P
100	115
360	x

$x = \frac{360 \times 115}{100}$

$= 414$

12) $P = 2(l + b)$
$240 = 2(85 + b)$
$120 = 85 + b$
$b = 35$
$\therefore$ Area $= l \times b$
$= 85 \times 35 = 2975\ m^2$

13) Teachers $\rightarrow$ 78
Girls $\rightarrow$ 78 + 258
$= 336$
Boys $\rightarrow$ 336 + 225
$= 561$
Total no. of people = 78 + 336 + 561
= 975

14) 1400 – 50 = 1350
1350 ÷ 6 = 225
Mr. Shah paid = 225 + 50
= ₹ 275.

15) Cost of 10 ball pens = ₹ 75

$\therefore$ cost of 1 ball pen $= \frac{75}{10} = 7.5$

cost of 2 dozen ball pens = 7.5 × 24
= ₹ 180

16) 5 l 500 ml = 5500 ml
1 bottle = 1.25 l
= 1.25 × 1000 ml
= 1250 ml
4 bottles = 4 × 1250
= 5000 ml
Water left in a kettle = 5500 – 5000
= 500 ml

17) 1 transmission = 30 cm
23 transmissions = 23 × 30
= 690 cm
paper left = 24 m – 690 cm
= 2400 – 690
= 1710 cm

18) radius = 14 m
$\therefore$ Area of ground = πr^2
$= \frac{22}{7} \times 14 \times 14$
$= 616\ m^2$
Cost of levelling = 616 × 50
= 30800.

19) Ena : Meena : Dika = 3 : 5 : 7
difference between Meena's and Dika's amount
= 7 – 5
= 2 units
$\therefore$ Actual difference $= \frac{2}{3+5+7} \times 30000$
$= \frac{2}{15} \times 30000$
= 4000.

20) L.C.M. of 48, 72 and 108 is 432.
Hence all three lights will change simultaneously after 432 seconds.
432 seconds = 7 min & 12 sec.
8 hrs. 20 min + 7 min 12 sec
= 8 : 27 : 12 hrs.

21)

Boys	Girls
60%	40%
x	812

$\therefore \quad x = \frac{60 \times 812}{40} = 1218$

22) $\frac{1}{3 \times 5} + \frac{1}{5 \times 7} - \frac{9+1}{3 \times 5 \times 7}$

$= \frac{1 \times 7 + 1 \times 3 - 10}{3 \times 5 \times 7}$

$= \frac{0}{3 \times 5 \times 7}$

$= 0$

23) $\frac{36 \times 0.003 \times 0.0035}{0.63 \times 0.8}$

$= 0.00075$

24) Saving on one toy = 20%

$= \frac{20}{100} \times 400$

$= 80$

Total saving = Rs. 2400

No. of toys $= \frac{2400}{80}$

$= 30$

25) $\left[4\frac{1}{2} + \left(5\frac{1}{3} \times 3\right)\right] - 2\frac{2}{3}$

$= \left[\frac{9}{2} + \left(\frac{16}{3} \times 3\right)\right] - \frac{8}{3}$

$= \left[\frac{9}{2} + 16\right] - \frac{8}{3}$

$= \frac{9+32}{2} - \frac{8}{3}$

$= \frac{41}{2} - \frac{8}{3}$

$= \frac{123 - 16}{6}$

$= \frac{107}{6}$

26)

Cost price	Selling price
100	125
200	x

$x = \frac{200 \times 125}{100}$

$= 250$

27) $11^2 + 12^2 = 121 + 144$

$= 265$

Nearest perfect square is

$16^2 = 256$

$\therefore$ No. to be subtracted = 265 – 256

= 9

28) To school = $\frac{3}{8}$ km

To Raghu's house = 250m

$= \left(\frac{250}{1000}\right)$km

$= \frac{1}{4}$ km

To home = $\frac{1}{2}$ km

Total $= \frac{3}{8} + \frac{1}{4} + \frac{1}{2}$

$= \frac{3+2+4}{8}$

$= \frac{9}{8}$

29)

Cost price	selling price
100	80
x	36

$x = \frac{100 \times 36}{80} = 45$

30) Let the Breadth = (x)m

$\therefore$ Length = (3x) m

$\because$ 2(Length + Breadth) = Perimeter

$2(x + 3x) = 56$

$8x = 56$

$x = \frac{56}{8} = 7$ m

Breadth = 7m

Length = $3 \times 7 = 21$ m

$\therefore$ Area of rectangle = Length × Breadth

$= 21 \times 7$

$= 147m^2$

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Examination Centre _____ Date : _____

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Incorrect way of shading

Correct way of shading

ANSWERS

Section - I

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Section - II

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Section - III

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48.	Ⓐ	Ⓑ	Ⓒ	Ⓓ
49.	Ⓐ	Ⓑ	Ⓒ	Ⓓ
50.	Ⓐ	Ⓑ	Ⓒ	Ⓓ

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Section			Mark	Marks Scored
1			x1	
2			x2	
3			x4	
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Remark :

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Section - III

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