Grade 07
Unit 01

Maths

Course Outline

- ◉ Integers
- ◉ Fractions and Decimals
- ◉ Data Handling

MAT

(Monthly Achievement Tests)

Short Code: 447308

Test ID: NMM07U010

SOUVENIR INFOTECH

Guide Lines

1. Each set consists of:

  50 | Warm-up/Foundation Questions

  30 | Regular Questions

  20 | Thinking Ability Questions

2. The time allocation and instructions regarding the questions are printed clearly in the beginning of each question types. The answers should be written or tick marked as per the instructions given. It is suggested to use pencil initially, so as to enable you to reuse the practice papers.

3. **According to the new pattern of CBSE these practice papers will be very useful especially for syllabus related Quiz, Debates, Visuals related checking and Orals etc.,**

4. After marking the answers, the scores of students can be checked and for marks obtained guidelines are given along with the question solving instructions. Follow those instructions and if, you are fully satisfied with your performance then check for your expected grades as per the CBSE guidelines as given on the back of each set.

5. Remember that this is only a guideline not the finally worked out result. You can further improve your performance by increase your practice.

6. For your convenience please follow following essential examiner's advices:

  a. Answer all the questions
  b. Read all the Options carefully
  c. Understand and use correct scientific language in your responses.

We from ⟨SOUVENIR INFOTECH⟩ wish skillful learning for your bright future.

Before going for the test, look at least :

1. First of all go through the syllabus of the test according to the **Course Outline** provided at the front page of each MAT.

2. After going through the syllabus once or twice or even more time as per your satisfaction, first of all do the Warm-up questions. If you score A+ grade in those 50 questions go to the next level otherwise go through the chapter again.

3. The box for **Specific Information** is very useful as it adds to your concept building. Try to fill specific information in the proper way so that you will get the maximum benefit of it.

4. **Let's Chat** portion will help you to prepare for oral assessment. Through this you can increase your capacity to interact on a particular topic related to your syllabus.

5. The **Extra Diet** portion is also there to enhance you knowledge through visulization of concept. This portion provides you added knowledge on various related concepts.

6. The information related to time factor is there to enhance your time management skills.

7. From the examiners point of view it is always advised to use Pencil for initial efforts. The use of pen is fruitful only when the final effort comes.

Examiner's Tips:

☞ Read the question carefully. Make sure you understand exactly what is required.

☞ If you find that you are unable to do a part of a question, do not give up. The next part may be easier and may provide a clue to what you might have done in the part you found difficult.

☞ Note the number of marks per question as guide to the depth of response needed.

☞ Underline or note the key words that tell you what is required.

☞ Underline or note data as you read the question.

☞ Structure your answer carefully.

☞ Show all steps in calculations. Include equations you use and show the substitution of data. remember to work according to units given.

☞ Make sure that your answers contain suitable significant figures (wherever necessary) and must include units in numericals.

☞ Draw diagrams and graphs carefully.

☞ Read data from graphs carefully; note scales and prefixes on axes.

☞ Keep your eye on the clock but don't panic.

☞ If you have time at the end, use it. Check that your descriptions and explanations make sense. Consider whether there is anything you could add to an explanation or description. Repeat calculations to ensure that you have not made a mistake.

To enlighten your fundamental/basic topic knowledge.

A+. If you score 45 or above marks, move to the next section confidently.

A. If you score between 40 and 45 marks, it is satisfactory. Bit more knowledge will bring excellent result.

B. If you score below 40, kindly go through the topic more seriously.

Section A (50 marks)   **Time given – 50 minutes + 5 minutes for revision**

Questions 1 to 50 carry 1 mark each.

For questions 1 to 20 four options are given one of them is the correct answer make your choice and write its name (a, b, c or d) in the answer box provided.

1. Which of the following is a vulgar fraction?

   (a) $\dfrac{3}{10}$ (b) $\dfrac{7}{100}$

   (c) $\dfrac{10}{3}$ (d) none of these

   T – 1 min
   S – Fractions and decimals

   Ans.

2. .05 =

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

   (c) $\dfrac{1}{20}$ (d) none of these

   T – 1 min
   S – Fractions and decimals

   Ans.

3. $0.2 \times 0.2 \times 0.2 =$

   (a) .008   (b) .08

   (c) .8   (d) none of these

   T – 1 min
   S – Fractions and decimals

   Ans.

4. Find the average of 4.2 , 3.8 and 7.6 .

   (a) 5.1   (b) 5.2

   (c) 3.8   (d) 6.1

   T – 1 min
   S – Fractions and decimals

   Ans.

5. $\dfrac{5.6}{1.4} =$

(a) 4   (b) $\dfrac{4}{3}$

(c) 1   (d) none of these

T – 1 min
S – Fraction and decimals

Ans.

6. How much less than -8 is -3?

(a) 5   (b) -5

(c) 11   (d) -11

T – 1 min
S – Integers

Ans.

7. The additive inverse of -6 is

(a) -6 (b) 6

(c) $\dfrac{1}{6}$ (d) none of these

T – 1 min
S – Integers

Ans.

8. Arimatic mean of 7, 8, and 7 is

(a) 9   (b) 7

(c) 8   (d) 7.5

T – 1 min
S – Data handling

Ans.

9. Aritmatic mean of 15, 19, 33, 44, 19

(a) 26   (b) 29

(c) 24   (d) 28

T – 1 min
S – Data handling

Ans.

10. Find the mode of following data

3 8 9 4 5 6 3 3 2 1 8

(a) 8   (b) 29

(c) 2   (d) 3

T – 1 min
S – Data handling

Ans.

True or False

11. $\dfrac{-2}{3} = \dfrac{3}{-4}$ since $-2 \times (-4) < 3 \times 3$

T – 1 min
S – Integers

Ans.

12. $\dfrac{-3}{5}$ is a fraction.

T – 1 min
S – Fractions and decimals

Ans.

13. $2\dfrac{7}{9}$ is a mixed number.

Ans.

14. $\dfrac{24}{47}$ is equivalent to $\dfrac{2}{4}$.

Ans.

15. $\dfrac{150}{1500}$ is equivalent to $\dfrac{1}{10}$.

Ans.

16. $\dfrac{5}{6} \div 1 = \dfrac{5}{6}$

Ans.

17. $\dfrac{7}{8} \div \dfrac{7}{8} = \dfrac{5}{6}$

Ans.

18. Division is an inverse Process of Multiplication.

Ans.

19. The sum of two integers is always a closure.

Ans.

20. Multiplication on integers is commutative.

Ans.

Fill in the blanks

21. The number of times a particular observation occurs is called its _____.

Ans.

22. _____ is larger than every negative integer.

T	– 1 min
S	– Integers

Ans.

23. The sum of two negative integers is a _____ .

T	– 1 min
S	– Integers

Ans.

24. In $\dfrac{a}{b}$ we call 'a' as numerator and 'b' is as _____ .

T	– 1 min
S	– Fraction and decimals

Ans.

25. A mixed fraction $= A$ whole number + _____ .

T	– 1 min
S	– Fraction and decimals

Ans.

26. A decimal has two parts the _____ part and the decimal part.

T	– 1 min
S	– Fraction and decimals

Ans.

27. The counting numbers are called _____ .

T	– 1 min
S	– Fraction and decimals

Ans.

28. The most common representative value of a group of data is _____ mean.

T	– 1 min
S	– Data handling

Ans.

29. Arithmetic mean is one of the representative value of _____.

T	– 1 min
S	– Data handling

Ans.

Questions 30–31. Find the pattern and complete the following.

30. 15, 10, 5, 0 _____, _____, _____ .

Ans. [   ]

31. $-11, -8, -5, -2,$ _____, _____, _____ .

Ans. [   ]

Questions 32–35. Use the sign of > < or = in the box to make the statement true.

32. $(-8) + (-4)$ _____ $-8 - (-4)$

Ans. [   ]

33. $-3 + 7 - 9$ _____ $15 - 8 + (-9)$

Ans. [   ]

34. $23 - 41 + 11$ _____ $23 - 41 - 11$

Ans. [   ]

35. Arrange 7, −4, 4, 0 and −3 in ascending order and then mark them on number line to check answer.

T	− 1 min
S	− Integers

Ans.

State the fraction as indicated.
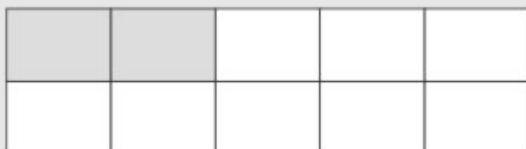
T	− 1 min
S	− Fractions and decimals

36.

Ans.

T	− 1 min
S	− Fractions and decimals

37.

Ans.

38.

Ans.

39.

Ans.

40.

Ans.
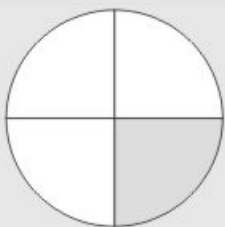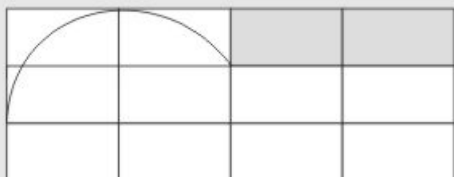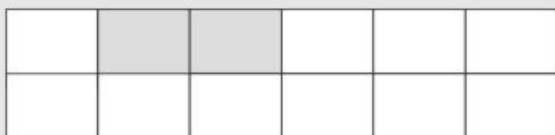
41. $(-5) \times (-3) \times (-4) \times (-2) \times (-6)$

Ans.

42. $(-3)\times(-5)\times(-8)\times(-12)\times(-4)\times(-12)\times(-4)\times(-15)$

Ans.

43. 5 negative integers and 2 positive integers.

Ans.

44. 10 negative integers and 3 positive integers.

Ans.

45. Find $5\dfrac{2}{3}$ of 6.

Ans.

46. Multiply $\dfrac{4}{15}$ and $\dfrac{3}{8}$.

Ans.

47. Find $\dfrac{3}{4} \times \dfrac{10}{27} \times \dfrac{44}{15}$.

Ans.

48. Write a pair of integers whose sum gives zero.

Ans.

49. Find the reciprocal of $7\dfrac{8}{7}$.

Ans.

50. Add $\dfrac{7}{15}$ and $\dfrac{11}{15}$.

Ans.

To enlighten your regular knowledge of topic. If you score more than 55 marks here, you have achieved this level brilliantly. Move to the next level of test papers.

Section B (60 marks)   **Time given – 45 minutes + 5 minutes for revision**
Questions 51 to 80 carry 2 marks each.

51. Find the integers whose product is −22.

| T | − 1 min |
| S | − Integers |

Ans.

52. Find $1860 \div (-15)$.

| T | − 1 min |
| S | − Integers |

Ans.

53. Find $(-1560) \div (-24)$.

| T | − 1 min |
| S | − Integers |

Ans.

Find the value of:

54. $1782 \times 346 + 218 \times 346$

Ans.

55. $1519 \times 886 - 519 \times 836$

Ans.

56. $(-45) \times [(-80) \times (72)] = [(-45) \times (-80)] \times (72)$

Ans.

57. $16 \times [(-5) + (-8)] = 16 \times (-5) + 16 \times (-8)$

Ans.

13

58. $(-18) \times [(-12) - (-7)] = (-18) \times (-12) - (-18) \times (-7)$

Ans.

59. Are they equal? If not why?
$11 \times [(-15) + (-15)]$ and $11 \times (-15) + (-18)$

Ans.

60. Add $\dfrac{-3}{10}$ and $\dfrac{11}{15}$.

Ans.

61. Evaluate $\dfrac{7}{8} + \dfrac{5}{12} + \dfrac{-11}{18}$

Ans.

62. What should be added to $\dfrac{-3}{8}$ to get $\dfrac{5}{6}$?

Ans.

63. Fill in the blanks $\dfrac{-2}{3} \times \dfrac{4}{7} = \dfrac{4}{7} \times$ _____

Ans.

64. Multiply : $3\dfrac{4}{5} \times 3\dfrac{3}{4} \times 2\dfrac{2}{7}$

Ans.

65. Verify: $1\dfrac{3}{8} \times \left(2\dfrac{1}{5} + 1\dfrac{2}{7}\right) = 1\dfrac{3}{8} \times 2\dfrac{1}{5} + 1\dfrac{3}{8} \times 1\dfrac{2}{7}$

Ans.

66. $1\dfrac{7}{8} \times 1\dfrac{5}{27} \times 1\dfrac{2}{5}$

Ans.

67. $1\dfrac{7}{9} \times 3\dfrac{3}{4} \times 1\dfrac{11}{25}$

Ans.

68. $1\dfrac{1}{14} \times 1\dfrac{1}{27} \times 1\dfrac{1}{35} \times 1\dfrac{1}{48}$

Ans.

69. Write the multiplicative inverse of:

(a) 15   (b) 25   (c) $\dfrac{4}{5}$

Ans.

70. Divide: $\frac{11}{15}$ by $\frac{9}{30}$.

Ans.

71. Subtract $\frac{8}{10}$ from $\frac{9}{16}$.

Ans.

72. Subtract the sum of $\frac{6}{2}$ and $\frac{3}{4}$ from the sum of $\frac{3}{7}$ and $\frac{5}{2}$.

Ans.

Questions 73–74. Fill the following boxes.

73. $\frac{5}{4} = \frac{\square}{16} = \frac{25}{\square} = \frac{-15}{\square}$

Ans.

74. $\dfrac{-3}{7} = \dfrac{\square}{14} = \dfrac{9}{\square} = \dfrac{-6}{\square}$

Ans.

75. Find the median of the following data 31, 35, 27, 29, 43, 37, 41, 36, 30

| T | – 2 min |
| S | – Data handling |

Ans.

76. Find the probability of coming Saturday in a week.

| T | – 2 min |
| S | – Data handling |

Ans.

77 – 80 the marks of Mathematics of a class are :

92, 93, 99, 88, 78, 100, 72, 88, 90, 100

77. What is the maximum marks obtained by the student

| T | – 8 min |
| S | – Data handling |

Ans.

78. What is the range of the marks.

Ans.

79. What is the mean of the marks.

Ans.

80. What is the mode.

Ans.

To enlighten your regular knowledge of topic. If you score more than 50 marks here, you have achieved this level brilliantly. Move to the next level of test papers.

Section C (60 marks)   **Time given – 45 minutes + 5 minutes for revision**

81. In a village, the population is of 4424. Half of them are men. One fourth of them are illiterate. How many men in the village are literate?

T	– 1 min
S	– Integers

Ans.

82. A train runs 283 km in 4 hours. How far will it travel in 7 hours?

T	– 1 min
S	– Integers

Ans.

83. A boy reads $\dfrac{4}{5}$ of the book. He finds that there are still 60 pages left to be read. How many pages are there in the book?

Ans.

84. A train travels in the speed of $54\dfrac{1}{3}$ km/hr for $4\dfrac{1}{2}$ hours. After that, it travels in the speed $60\dfrac{1}{2}$ km/hr for the next $2\dfrac{1}{2}$ hours. What distance does the train travel during these 7 hours?

Ans.

85. A train covers a distance of $272\frac{1}{2}$ km in 5 hours. How far will it travel in 8 hours 20 minutes?

T	– 2 min
S	– Fractions and decimals

Ans. [   ]

86. There are 1200 students in a school. If $\frac{1}{20}$ of the students is absent on a day, find the number of students who were present on that day. Find also the fractions of the students who were present.

T	– 2 min
S	– Fractions and decimals

Ans. [   ]

87. A train runs for 3 hours at a speed of $65\frac{2}{3}$ km/hour. After running for 3 hours, it runs further for 6 hours at a speed of $72\frac{1}{2}$ km/hour. What is the total distance travelled?

T	− 2 min
S	− Fractions and decimals

Ans.

88. In a colony, two third of the total vehicles are scooters. Of the remaining vehicles three-fourth are cycles. The rest of the vehicles are 120 cars. How many vehicles are there in the colony?

T	− 2 min
S	− Fractions and decimals

Ans.

89. Kanta spends $\frac{1}{4}$ of her money at one shop. She spends $\frac{1}{2}$ of what was left with her on the other shop. $\frac{2}{3}$ of the amount left with her spent on rickshaw. At the end, she had Rs. 40 with her. How much money did she have in the beginning?

T	– 2 min
S	– Fractions and decimals

Ans.

90. A man has two packets of currency notes. The total money in the first packet is Rs. 960 and the other packet has Rs. 600. He gives $\frac{1}{3}$ of the first packet and $\frac{1}{4}$ of the other to Usha. He gives $\frac{1}{5}$ of the first packet and $\frac{1}{3}$ of the other packet to Rachana. Who received more and by how much?

T	– 2 min
S	– Fractions and decimals

Ans.

91. If the cost of $20\frac{3}{4}$ litres petrol is Rs. 840.75, what is the cost of 1 litre of petrol?

T	– 2 min
S	– Fractions and decimals

Ans.

92. If the price of the sugar is Rs. $19\frac{1}{2}$ for one kilogram, what is the cost of $15\frac{3}{4}$ kg of sugar?

T	– 2 min
S	– Fractions and decimals

Ans.

93. Three suitcases weight $12\frac{1}{4}$ kg, $13\frac{3}{4}$ kg and $16\frac{1}{5}$ kg, respectively. A coolie carries all the suitcases. What is the total weight carried by the coolie?

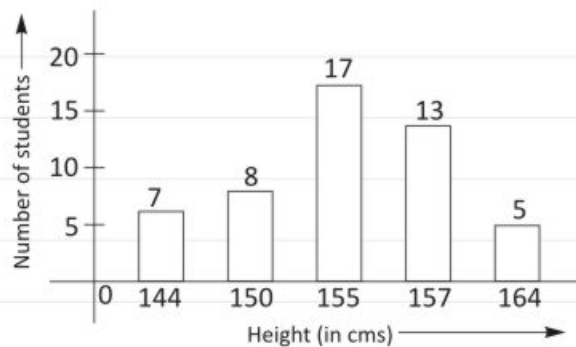| T	– 3 min
S	– Fractions and decimals

Ans.

94. A boy Reads $\frac{3}{4}$ of the book. He finds that there are still 46 pages left to be
read. How many pages are there in the book?

T	– 3 min
S	– Fractions and decimals

Ans. [   ]

Questions 95– 97. The bar graph represents the height of 50 students of class XI of a school. Answer the following questions.

95. What percent of the total number of students have their heights more than 150 cm?

T	– 9 min
S	– Data handling

Ans. [   ]

96. How many students have heights between 150 cm and 160 cm?

Ans. [   ]

97. What is the minimum height of students? How many students has minimum height?

Ans. _____

98. Find the median of the data 32, 17, 79, 19, 72, 68, 25

T	– 3 min
S	– Data handling

Ans. _____

99 – 100, A survey report is given below.

Farourite subjects	English	Physics	Maths	Hindi	So. Science
Number of student	200	250	225	260	100

99. Which is the most preferred subject

T	– 6 min
S	– Data handling

Ans. _____

100. Which is the least preferred subject.

Ans. _____

Tools at a glance

Opening Window with instructions for your potential analysis and guideline to improve your performance.

Opening Window

Let's Chat, the feature with suggestive topics for discussion so as to improve your capacity to debate on various topics.

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T — ..............................
S — ..............................
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Box with time break-up of questions **(T)** and its concept **(S, i.e., subject)**

Let's Chat

Brain Teasers

Brain Teasers i.e., Questions with difference to make the concepts of students crystal clear. These are the questions with higher difficulty levels to check the grip of the students over the concepts.

Extra Diet, the web link, the notation: www._____ to provide additional information regarding the concept for more clarity of thoughts.

Extra Diet

CBSE GRADING PATTERN

As the new pattern includes **CCE** (Continuous and Comprehensive Evaluation) which will be run in two terms i.e., from April to September and October to March. Thus the school will conduct four **Formative** and two **Summative** Assessments.

However, the most generalised version of grades is given below:

MARKS PERCENTAGE	GRADE	GRADE POINT	CATEGORY
91 to 100	A1	10	Exceptional
81 to 90	A2	9	Excellent
71 to 80	B1	8	Very Good
61 to 70	B2	7	Good
51 to 60	C1	6	Ordinary (Fair)
41 to 50	C2	5	Average
33 to 40	D	4	Below Average
21 to 32	E1	3	Improvement Needed
Below 20	E2	Below 2	Unsatisfactory