

Grade 06 Unit 02

Maths

Course Outline

- Playing with numbers
- Basic geometrical ideas

MAT

(Monthly Achievement Tests)

Short Code: 447307

Test ID: NMM06U020



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  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 your knowledge through visualization 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.

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. _____ is a factor of every number.

- (a) 0 (b) 1
(c) 2 (d) none of these

T – 1 min
S – Playing with numbers

Ans.

2. First multiple of 13 is

- (a) 13 (b) 26
(c) 1 (d) 0

T – 1 min
S – Playing with numbers

Ans.

3. Prime number is

- (a) 11 (b) 12
(c) 4 (d) 0

T – 1 min
S – Playing with numbers

Ans.

4. Smallest even prime number is

- (a) 2 (b) 4
(c) 6 (d) 8

T – 1 min
S – Playing with numbers

Ans.

5. Which number is not divisible by 5

- (a) 650 (b) 3895
(c) 8491 (d) 6895

T – 1 min
S – Playing with numbers

Ans.

| | | |
|-----|--|--|
| 6. | Which number is divisible by 11 (a) 308 (b) 132 (c) 565 (d) 6607 | T – 1 min S – Playing with numbers |
| | | Ans. |
| 7. | Which number are co-prime numbers (a) 5, 17 (b) 6, 18 (c) 12, 240 (d) none of these | T – 1 min S – Playing with numbers |
| | | Ans. |
| 8. | HCF of 5 and 15 (a) 15 (b) 10 (c) 5 (d) 1 | T – 1 min S – Playing with numbers |
| | | Ans. |
| 9. | LCM of 24 and 30 (a) 120 (b) 360 (c) 240 (d) none of these | T – 1 min S – Playing with numbers |
| | | Ans. |
| 10. | HCF of 2 and 4 (a) 2 (b) 4 (c) 8 (d) 1 | T – 1 min S – Playing with numbers |
| | | Ans. |
| 11. | The pointed end of your pencil is an example of (a) line (b) point (c) angle (d) none of these | T – 1 min S – Basic geometrical ideas |
| | | Ans. |
| 12. | A tube light of your classroom is an example of (a) line segment (b) point (c) angle (d) none of these | T – 1 min S – Basic geometrical ideas |
| | | Ans. |
| 13. | A _____ contains a countless number of points. (a) line (b) point (c) angle (d) none of these | T – 1 min S – Basic geometrical ideas |
| | | Ans. |

14. The letter x of the English alphabet is an example of
 (a) parallel lines (b) line segment
 (c) intersecting lines (d) none of these

T – 1 min
 S – Basic geometrical ideas

Ans.

15. The opposite edges of ruler in an example of
 (a) parallel lines (b) line segment
 (c) intersecting lines (d) none of these

T – 1 min
 S – Basic geometrical ideas

Ans.

16. A _____ is portion of line
 (a) ray (b) angle
 (c) point (d) none of these

T – 1 min
 S – Basic geometrical ideas

Ans.

17. A four sided polygon is a circle
 (a) circle (b) triangle
 (c) diameter (d) none of these

T – 1 min
 S – Basic geometrical ideas

Ans.

18. A _____ of a circle divided it into two equal parts
 (a) radius (b) chord
 (c) diameter (d) none of these

T – 1 min
 S – Basic geometrical ideas

Ans.

19. A _____ in a three sided polygon
 (a) square (b) triangle
 (c) quadrilateral (d) none of these

T – 1 min
 S – Basic geometrical ideas

Ans.

20. An _____ is made up of two rays starting from a common end point.

T – 1 min
 S – Basic geometrical ideas

Ans.

True or False

21. A chord of a circle is a line segment joining any two points on the circle.

T – 1 min
 S – Basic geometrical ideas

Ans.

22. Diameter is half of the radius.

T – 1 min
S – Basic geometrical ideas

Ans.

23. In angle, the vertex is always written as the middle letter.

T – 1 min
S – Basic geometrical ideas

Ans.

24. The line segments forming a polygon are called its sides.

T – 1 min
S – Basic geometrical ideas

Ans.

25. A polygon is a closed curve.

T – 1 min
S – Basic geometrical ideas

Ans.

26. Ray of light from a point is parallel lines.

T – 1 min
S – Basic geometrical ideas

Ans.

27. Parallel lines always intersect at one point.

T – 1 min
S – Basic geometrical ideas

Ans.

28. Any two sides with a common end point are called the adjacent sides of the polygon.

T – 1 min
S – Basic geometrical ideas

Ans.

29. There are no diagonals in a polygon.

T – 1 min
S – Basic geometrical ideas

Ans.

30. The common end point is the vertex of the angle.

T – 1 min
S – Basic geometrical ideas

Ans.

31. 2 is the common multiple of 4 and 6.

T – 1 min
S – Playing with numbers

Ans.

32. HCF is also called GCD.

T – 1 min
S – Playing with numbers

Ans.

33. If two numbers are divisible by a number, then their sum is also divisible by that number.

T – 1 min
S – Playing with numbers

Ans.

34. The prime factorization of 121 is 11×11 .

T – 1 min
S – Playing with numbers

Ans.

35. 3 and 18 are co-prime numbers.

T – 1 min
S – Playing with numbers

Ans.

36. The smallest even number is 2.

T – 1 min
S – Playing with numbers

Ans.

37. 219 is divisible by 3.

T – 1 min
S – Playing with numbers

Ans.

38. If a number is divisible by 2 and 3 both then it is divisible by 6 also.

T – 1 min
S – Playing with numbers

Ans.

39. If a number is divisible by 3 then it is also divisible by 9 also.

T – 1 min
S – Playing with numbers

Ans.

40. Second multiple of 11 is 22.

T – 1 min
S – Playing with numbers

Ans.

Fill in the blanks

41. Number of multiples of a given number is _____.

T – 1 min
S – Playing with numbers

Ans.

42. Numbers having more than two factors are called _____.

T – 1 min
S – Playing with numbers

Ans.

43. The method of finding composite numbers are called _____.

T – 1 min
S – Playing with numbers

Ans.

44. The smallest composite number is _____.

T – 1 min
S – Playing with numbers

Ans.

45. If a number is divisible by 9, it must be divisible by _____.

T – 1 min
S – Playing with numbers

Ans.

46. An _____ is a portion of a circle.

T – 1 min
S – Basic geometrical ideas

Ans. _____

47. The _____ is a line segment that connects the centre to a point on the circles.

T – 1 min
S – Basic geometrical ideas

Ans. _____

48. If a curve does not cross itself, then it is called a _____.

T – 1 min
S – Basic geometrical ideas

Ans. _____

49. The rail lines are the examples of _____ lines.

T – 1 min
S – Basic geometrical ideas

Ans. _____

50. The tip of a compass is an example of _____.

T – 1 min
S – Basic geometrical ideas

Ans. _____

30

Regular Questions

Opening
Window

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. Write all the factors of 60.

T – 1 min
S – Playing with numbers

Ans.

52. Write first five multiples of 11.

T – 1 min
S – Playing with numbers

Ans.

53. Find all the multiples of 12 upto 100.

T – 1 min
S – Playing with numbers

Ans.

54. Write all the prime numbers less than 10.

T – 1 min
S – Playing with numbers

Ans.

55. What is the greatest prime number between 1 and 15.

T – 1 min
S – Playing with numbers

Ans.

56-61, Using divisibility test, check which of the numbers are divisible by 2, 3, 4, 5, 6, 8, 9, 10 and 11.

56. 219

T – 1 min
S – Playing with numbers

Ans.

57. 52

T – 1 min
S – Playing with numbers

Ans.

58. 98

T – 1 min
S – Playing with numbers

Ans.

59. 61809

T – 1 min
S – Playing with numbers

Ans.

60. 400

T – 1 min
S – Playing with numbers

Ans.

61. 454

T – 1 min
S – Playing with numbers

Ans.

62. Find the common factor of 37 and 42.

T – 1 min
S – Playing with numbers

Ans.

63. Find the prime factorisation of 210.
Playing with numbers

T – 1 min
S – Playing with numbers

Ans.

64. Find the HCF of 22, 24 and 36.

T – 1 min
S – Playing with numbers

Ans.

65. Find the LCM of 15, 20 and 27.

T – 1 min
S – Playing with numbers

Ans.

66-67, Find the open and close centre.

66.



T – 2 min
S – Basic geometrical ideas

Ans.

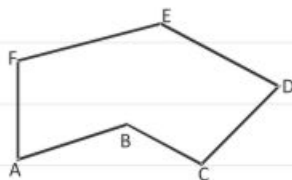
67.



T – 2 min
S – Basic geometrical ideas

Ans.

Question 68 to 71



68. What are the sides of polygon ABCDEF.

T – 2 min
S – Basic geometrical ideas

Ans.

69. Name all the vertices of the polygon.

T – 2 min
S – Basic geometrical ideas

Ans.

70. Are the sides AB and BD are adjacent sides.

T – 2 min
S – Basic geometrical ideas

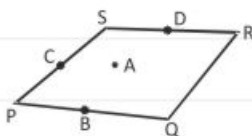
Ans.

71. Draw the diagonals of the polygon.

T – 2 min
S – Basic geometrical ideas

Ans.

Question 72 to 76



T – 10 min
S – Basic geometrical ideas

72. The opposite sides of the quadrilaterals are _____ and _____.

Ans.

73. _____ and _____ are opposite angles similarly _____ and _____ are also opposite angles.

Ans.

74. The point _____ is in the interior of the quadrilateral.

Ans.

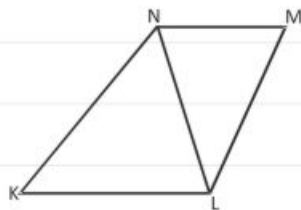
75. The point _____ and _____ are on the quadrilateral.

Ans.

76. The point _____ is in the extension of the quadrilateral.

Ans.

Question 77 to 80.



T – 8 min
S – Basic geometrical ideas

77. Identify the two triangles in the figure.

Ans.

78. Write the names of all angles.

Ans.

79. Write the names of all line segments.

Ans.

80. Write the names of diagonal of the quadrilateral.

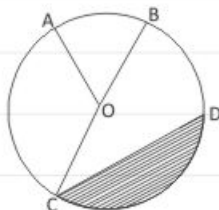
Ans.

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

Question 81 to 85



81. All radius of circle.

T – 10 min
S – Basic geometrical ideas

Ans.

82. A chord of circle.

Ans.

83. A segment of circle.

Ans.

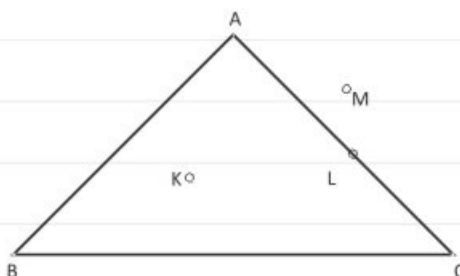
84. A sector of the circle.

Ans.

85. A diameter of the circle.

Ans.

Question 86 to 90.



86. Write the names of angles.

T – 10 min
S – Basic geometrical ideas

Ans.

87. Write the names of vertex.

Ans.

88. _____ is in the interior of the triangle.

Ans.

89. _____ is on the triangle.

Ans.

90. _____ is in the exterior of the triangle.

Ans.

91. Find the smallest 4 digit number which is divisible by 15, 18 and 22.

T – 2 min
S – Playing with numbers

Ans.

92. Find the least number which when divided by 80, 85 and 90 leaves a remainder 11.

T – 2 min
S – Playing with numbers

Ans.

93-95, Find the LCM of the following:

93. 5, 9 and 26.

T – 2 min
S – Playing with numbers

Ans.

94. 15, 20, 22 and 32.

T – 2 min
S – Playing with numbers

Ans.

95-96, Find the HCF of the following:

95. 198 and 78.

T – 2 min
S – Playing with numbers

Ans.

96. 42 and 120.

T – 3 min
S – Playing with numbers

Ans.

97. Three persons steps measure 80 cm, 75 cm and 85 cm respectively. What is the minimum distance each would walk so that all can cover the same distance in complete steps.

T – 3 min
S – Playing with numbers

Ans.

98. Traffic lights at three different roads crossing changes after every 56 seconds, 70 seconds and 102 seconds respectively. If they change simultaneously at 10 a.m, at what time will they change simultaneously again?

T – 3 min
S – Playing with numbers

Ans.

99. The length, breadth and height of a room are 10 m 25 cm, 825 cm and 5 m respectively. Find the largest tape which can measure the three dimensions of the room exactly.

T – 3 min
S – Playing with numbers

Ans.

100. Find the HCF and LCM of 120 and 42.

T – 3 min
S – Playing with numbers

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.

T —
S —

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 |
| 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 |