

# Grade 06 Unit 06

## Maths

### Course Outline

#### ◉ Summative I

# MAT

(Monthly Achievement Tests)

Short Code: 447307

Test ID: NMM06U060



### 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. The place value of 6 in the numeral 186304 is

(a) 6 (b) 6340  
(c) 6000 (d) 186

T – 1 min

S – Knowing our numbers

Ans. 

2. The greatest natural number is

(a) 1 crore (b) 10 crore  
(c) 100 crore (d) none of these

T – 1 min

S – Knowing our numbers

Ans. 

3. The value of  $6308 \times 931 - 6308 \times 831$  is

(a) 630800 (b) 8967000  
(c) 2497680 (d) 463000

T – 1 min

S – Whole numbers

Ans. 

4.  $5 \div 0 =$  \_\_\_\_\_

(a) 5 (b) 0  
(c) 1 (d) none of these

T – 1 min

S – Whole numbers

Ans. 

5. The smallest prime number is

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

T – 1 min

S – Whole numbers

Ans.

6. If  $x$  and  $y$  are two numbers such that  $x$  is a factor of  $y$  then the LCM of  $x$  and  $y$ .

- (a)  $x$  (b)  $y$   
(c)  $x + y$  (d)  $xy$

T – 1 min  
S – Playing with numbers

Ans.

7.  $47 - (-32) = \dots\dots\dots$

- (a) 15 (b) -15  
(c) 79 (d) none of these

T – 1 min  
S – Integers

Ans.

8. The table below shows the number of chicken nuggets bought by customers at a stall yesterday.

Number of customers	Number of nuggets per customer
20	4
36	6
24	8

The stall sold \_\_\_\_\_ nuggets yesterday.

- (a) 18 (b) 80  
(c) 320 (d) 488

T – 1 min  
S – Playing with numbers

Ans.

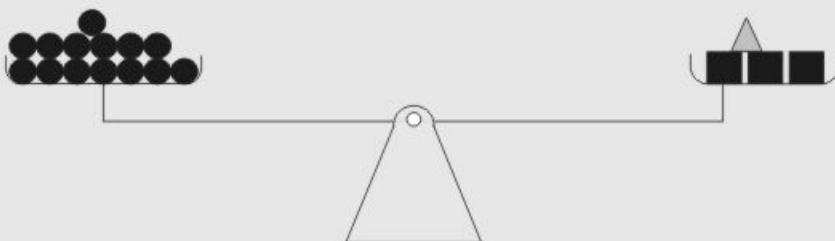
9. \_\_\_\_\_ are common factors of 16, 32 and 56.

- (a) 1, 4 and 7 (b) 1, 2, 6 and 8  
(c) 1, 2, 4 and 8 (d) 1, 3, 4 and 8

T – 1 min  
S – Playing with numbers

Ans.

10. Given  $\blacksquare = 15$  kg;  $\triangle = 10$  kg. So in the figure:



The weight of each  $n$  is \_\_\_\_\_.

- (a) 2 kg (b) 24 kg  
(c) 30 kg (d) 1.66 kg

T – 1 min  
S – Knowing our numbers

Ans.

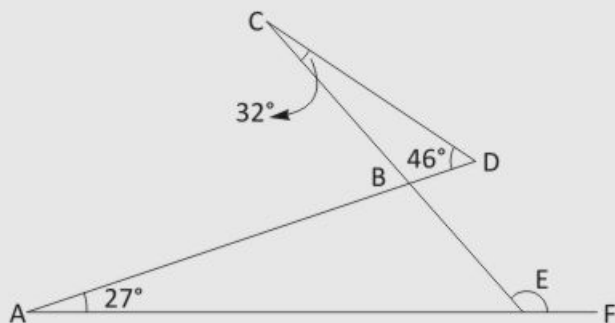
11. In the diagram below, AEF, ABD and CBE are straight lines. Find  $\angle CEF$ .

(a)  $59^\circ$

(b)  $78^\circ$

(c)  $102^\circ$

(d)  $129^\circ$



T – 1 min  
S – Basic geometrical ideas

Ans.

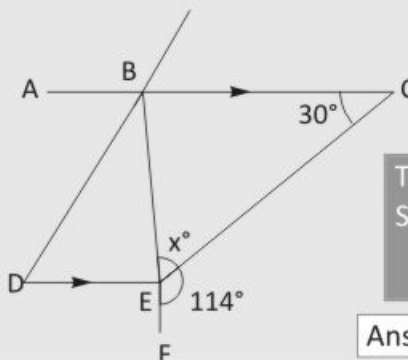
12. In the diagram below, ABC, and BEF are straight lines. Find  $\angle DBE$ .

(a)  $33^\circ$

(b)  $66^\circ$

(c)  $84^\circ$

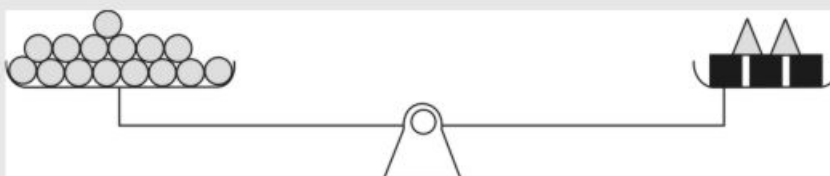
(d)  $147^\circ$



T – 1 min  
S – Basic geometrical ideas

Ans.

13.  $\blacksquare = 4 \text{ Kg}$ ,  $\blacktriangle = 7 \text{ Kg}$



The weight of each  $\bigcirc$  is \_\_\_\_\_

(a) 1.25 kg

(b) 2 kg

(c) 1.73 kg

(d) 1.33 kg

T – 1 min  
S – Knowing our numbers

Ans.

14. The table shows the number of Burger suggest bought by customers at a stall yesterday.

Number of customers	25	36	24
No. of burgers per customer	5	3	6

The stall sold \_\_\_\_\_ burgers yesterday

- (a) 377 (b) 420  
(c) 387 (d) 321

T – 1 min  
S – Whole number

Ans.

15. What must be subtract from  $-3$  to get  $-9$

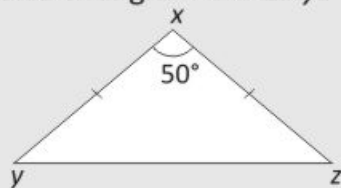
- (a)  $-6$  (b) 12  
(c) 6 (d)  $-12$

T – 1 min  
S – Integers

Ans.

16.  $\triangle xyz$  is an issosceles triangle. Find  $\angle xyz$

- (a)  $20^\circ$   
(b)  $65^\circ$   
(c)  $115^\circ$   
(d)  $160^\circ$



T – 1 min  
S – Basic geometrical ideas

Ans.

17. How many 3 digit numbers can be formed with the digits 1, 4, 1.

- (a) 6 (b) 3  
(c) 5 (d) 8

T – 1 min  
S – Whole number

Ans.

18. \_\_\_\_\_ are common factors of 16, 18, and 32.

- (a) 1, 2 and 3 (b) 1, 2 and 4  
(c) 1, 2 and 3 (d) none of these

T – 1 min  
S – Playing with numbers

Ans.

19. 33,999, rounded off to the nearest thousand.

- (a) 34,000 (b) 33,900  
(c) 33,000 (d) 34,100

T – 1 min  
S – Whole number

Ans.

20. \_\_\_\_\_ uses to draw and measure angles

- (a) Ruler (b) Set square  
(c) The protractor (d) none

T – 1 min  
S – Basic geometrical ideas

Ans.

**True or False.**

21. Every angle of an obtuse triangle is less than  $90^\circ$ .

T – 1 min  
S – Basic geometrical ideas

Ans.

22. Every angle of a right triangle is  $90^\circ$

T – 1 min  
S – Basic geometrical ideas

Ans.

23. Difference of any two sides of a triangle is greater than the third side.

T – 1 min  
S – Understanding element shapes

Ans.

24. Sum of any two sides of a triangle is greater than the third side.

T – 1 min  
S – Understanding element shapes

Ans.

25. Two supplementary angles form a linear pair.

T – 1 min  
S – Understanding element shapes

Ans.

26. If two line segments do not intersect, they are parallel.

T – 1 min  
S – Understanding element shapes

Ans.

27. A ray has one end point and a segment has two end points.

T – 1 min  
S – Basic geometrical ideas

Ans.

28. Two planes intersect in a line.

T – 1 min  
S – Basic geometrical ideas

Ans.

29. A line has no end point.

T – 1 min  
S – Basic geometrical ideas

Ans.

30. The divider is used to compare lengths.

T – 1 min  
S – Practical geometry

Ans.

### Questions

31. Draw a line of 6.2 cm.

T – 1 min  
S – Integers

Ans.

### Evaluate the following

32.  $(-18) + (14) - (16) - (-32)$

T – 1 min  
S – Integers

Ans.

33.  $10 + (-14) - (-39) + 42$

T – 1 min  
S – Integers

Ans.

34. Find the LCM of 25 and 65.

T – 1 min  
S – Playing with numbers

Ans.

35. Find  $1569 \times 887 - 569 \times 887$

T – 1 min  
S – Whole numbers

Ans.

36.  $-80 \times (10 - 5 - 43 + 98)$

T – 1 min  
S – Whole numbers

Ans.

37.

$$\begin{array}{r} 973 \\ - \quad * * 1 \\ \hline 53* \end{array}$$

T – 1 min  
S – Playing with numbers

Ans.

38. Round off each number to the nearest whole number  
(a) 79.2 (b) 25.69

T – 1 min  
S – Decimals

Ans.

39. Round off each to 1 decimal place  
(a) 31.87 km (b) 82.12 cm

T – 1 min  
S – Decimals

Ans.

40. Round off each to 2 decimal place.

(a) 63.849 kg

(b) 45.173 g

T – 1 min

S – Decimals

Ans.

41. 1000 Kg = \_\_\_\_\_ gm

T – 1 min

S – Exponents

Ans.

42.  $25 \times 12 = 25 \times 10 +$

T – 1 min

S – Whole numbers

Ans.

43. 100 m = \_\_\_\_\_ .

T – 1 min

S – Decimals

Ans.

44. Diameter of a circle is twice its \_\_\_\_\_ .

T – 1 min  
S – Understanding elementary shapes

Ans.

45. Perimeter of a circle \_\_\_\_\_ if radius is  $r$ .

T – 1 min  
S – Understanding elementary shapes

Ans.

46. \_\_\_\_\_ has equal angles.

T – 1 min  
S – Understanding elementary shapes

Ans.

47. 1 km = \_\_\_\_\_ m.

T – 1 min  
S – Decimals

Ans.

48. Two lines in a plane which do not intersect even when produced indefinitely in either direction, are known as \_\_\_\_\_.

T – 1 min  
S – Basic geometrical ideas

Ans.

49. If one side of a triangle is produced, the exterior angle so formed is equal to the sum of the \_\_\_\_\_.

T	– 1 min
S	– Understanding elementary shapes

Ans.

50. The acute angles of a right triangle are \_\_\_\_\_.

T	– 1 min
S	– Understanding elementary shapes

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.

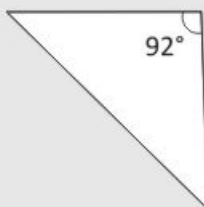
Section B (60 marks)

Time given – 45 minutes + 5 minutes for revision

Questions 51 to 80 carry 2 marks each.

51-52, Look at the figure given below. State for each triangle whether it is acute, right or, obtuse.

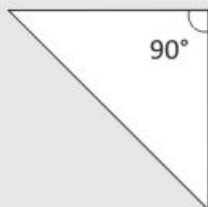
51.



T – 1 min  
S – Understanding elementary shapes

Ans.

52.



T – 1 min  
S – Understanding elementary shapes

Ans.

53-54, In figure, some triangles have been given. State for each triangle, whether it is scalene, isosceles, or equilateral :

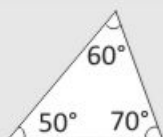
53.



T – 1 min  
S – Understanding elementary shapes

Ans.

54.



T – 1 min  
S – Understanding elementary shapes

Ans.

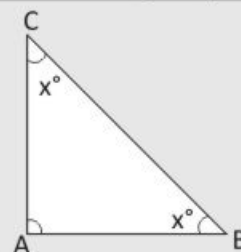
55. One of the angles of a triangle is  $160^\circ$ , and the other two angles are equal. What is the measure of each of these angles?

T – 1 min  
S – Understanding elementary shapes

Ans.

56. Find  $x$ .

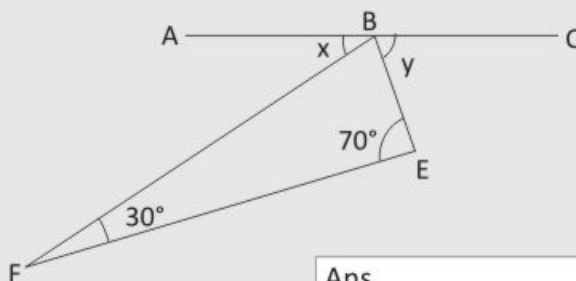
T – 1 min  
S – Understanding elementary shapes



Ans.

57. In the diagram below, ABC is a straight line. Find the sum of  $\angle x$  and  $\angle y$ .

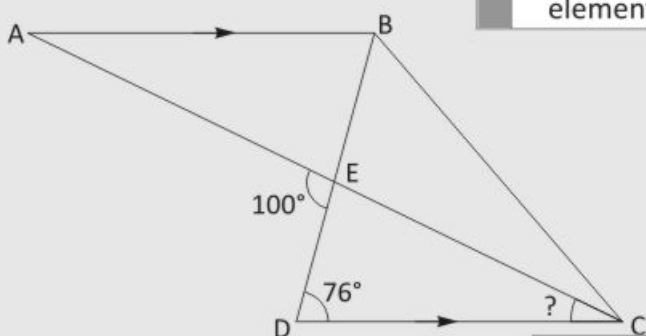
T – 1 min  
S – Understanding elementary shapes



Ans.

58. In the diagram below, AEC and BED are straight lines. Find  $\angle ECD$ .

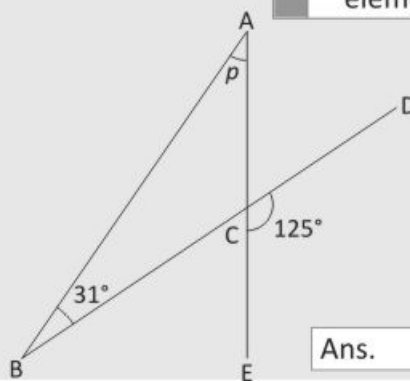
T – 1 min  
S – Understanding elementary shapes



Ans.

59. In the diagram below, ACE and BCD are straight lines. Find  $\angle BAE$ .

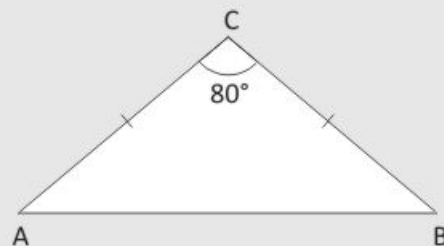
T – 1 min  
S – Understanding elementary shapes



Ans.

60.  $\triangle ABC$  is an isosceles triangle. Find  $\angle A$ ?

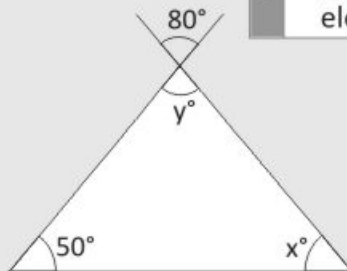
T – 1 min  
S – Understanding elementary shapes



Ans.

61. Find the values of  $x$  and  $y$  from the following figure.

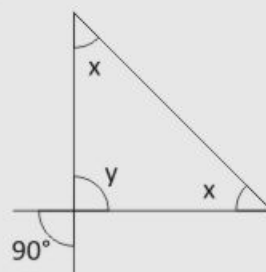
T – 1 min  
S – Understanding elementary shapes



Ans.

62. Find  $x$  and  $y$ .

T – 1 min  
S – Understanding elementary shapes



Ans.

63. Quarterly fee charged from a student of class VI in a school is Rs. 20. If there are, in all 235 students in class VI, find the total collections.

T – 1 min  
S – Whole numbers

Ans.

64. A clock shows 7.00 am. If the hour hand turns  $150^\circ$  clockwise, what time will the clock show?

T – 1 min  
S – Playing with numbers

Ans.

65. The number of pupils in a school doubled every year. The school had its full intake of 1600 pupils in the year 2004. In which year did the school start with an intake of only 25 pupils?

T – 1 min  
S – Whole numbers

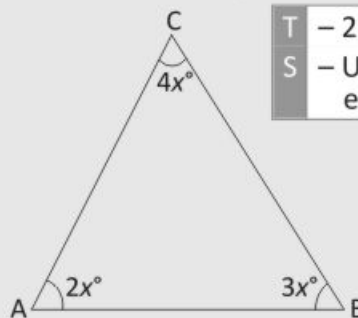
Ans.

66. A number  $M$  is smaller than 100.  $M$  is a multiple of 4 as well as multiple of 8. What is greatest possible number of  $M$ ?

T – 2 min  
S – Whole numbers

Ans.

67. The angles of a triangle are as  $2 : 3 : 4$ . Find the angles.



T – 2 min  
S – Understanding elementary shapes

Ans.

68. Kabeer deposited Rs 25000 in his saving bank account. Later he with draw Rs 5425 from it. How much money was left in his account?

T – 2 min  
S – Whole numbers

Ans.

69. The population of a village is 1500. If 489 are men and 472 are women, find the number of children?

T – 2 min  
S – Whole numbers

Ans.

70. Find the difference between the values of digit 2 and digit 4 in 3.234.

T – 2 min  
S – Decimals

Ans.

71. Subtract the smallest value of digit 5 from the greatest value of 5 in 0.555.

T – 2 min  
S – Decimals

Ans.

72. Find the difference between the largest number of seven digit and the smallest number of eight digit.

T – 2 min  
S – Knowing our numbers

Ans.

73. Fill in the blank cells in the following magic square.

	8	13
	12	
11		

T – 2 min  
S – Playing with numbers

Ans.

74. Fill in the blank cells in the following magic square.

1	14	15	
8	11		
		6	9
13			16

T – 2 min  
S – Playing with numbers

Ans.

75. Find the successor and predecessor 298

T – 2 min  
S – Knowing our numbers

Ans.

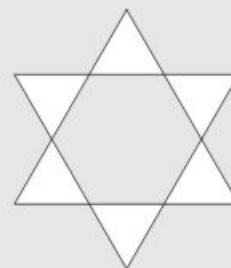
76. Draw an angle of  $135^\circ$ .

T – 2 min  
S – Basic geometrical ideas

Ans.

77. How many triangles are there in the given figures?

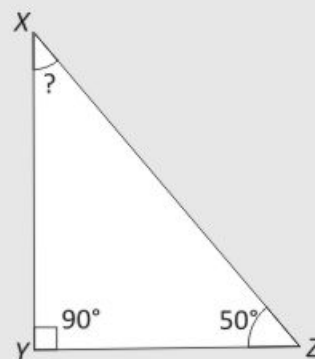
T – 2 min  
S – Understanding elementary shapes



Ans.

78.  $\triangle XYZ$  is a right-angled triangle. Find  $\angle YXZ$ .

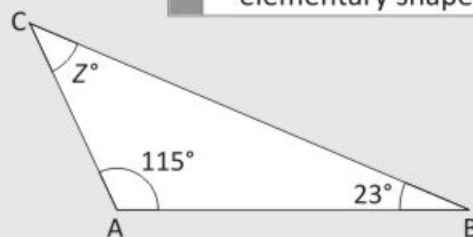
T – 2 min  
S – Understanding elementary shapes



Ans.

79. Find  $\angle Z = ?$

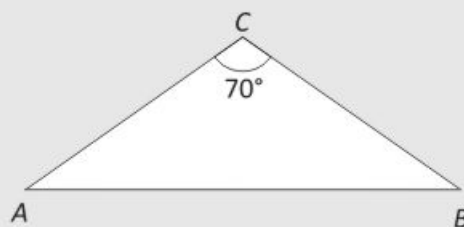
T – 2 min  
S – Understanding elementary shapes



Ans.

80.  $\triangle ABC$  is an isosceles triangle. Find  $\angle A$

T – 2 min  
S – Understanding elementary shapes



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. Gourav had Rs 61,000. He gave Rs 8750 to Ashok, Rs 12638 to Akbar and Rs 35000 to Anthony. How much money was left with him?

T – 2 min  
S – Knowing our numbers

Ans.

82. The cinema hall is to be constructed in which each row must have 36 seats. Determine the minimum number of rows required to make 600 persons seated at one time.

T – 2 min  
S – Knowing our numbers

Ans.

83. A pumping set of 1.5 kilo watts (kw) can raise 1500 litres of water from a well of certain depth in certain time. Pumping set of how many kilowatts (kw) is needed to raise 4500 litres of water from the well of the same depth and in the same time?

T	– 2 min
S	– Knowing our numbers

Ans.

84. Arrange the number in ascending order:  
0.3, 3.5, 3.05, 0.003, 0.035, 0.0035

T	– 2 min
S	– Decimals

Ans.

85. Round off each numbers to the nearest whole number?  
(a) 175.95 (b) 19.002

T	– 2 min
S	– Decimals

Ans.

86. Find HCF 106, 159 and 265.

T – 2 min  
S – Playing with numbers

Ans.

87.  $1024 + 512 + (-256) + (-128) + 64 = \underline{\hspace{2cm}}$ .

T – 2 min  
S – Integers

Ans.

88. Write the prime numbers between 1 to 50.

T – 2 min  
S – Whole numbers

Ans.

89. 240 pupils chose mathematic as their farourite subject. If 4 pupils from the "others" group charged their minds and chose mathematics as their favourite subject, how many pupils chose mathematics as their favourite subject?

T – 2 min  
S – Knowing our numbers

Ans.

90. Subtract  $(-5)$  from  $(-2)$  on number line.

T – 2 min  
S – Integers

Ans.

91. Add  $(-2)$  from  $(5)$  on number line.

T – 2 min  
S – Integers

Ans.

92. Draw a line segment  $\overline{MM}$  of 3.8 cm without using ruler, construct another same line PQ.

T – 2 min  
S – Practical geometry

Ans.

93. Draw a line 8.9 cm and construct its perpendicular bisector.

T – 2 min  
S – Practical geometry

Ans.

94. Construct an angle of  $90^\circ$  without using protractor.

T – 2 min  
S – Practical geometry

Ans.

95. Construct an angle of  $157^\circ$ .

T – 2 min  
S – Practical geometry

Ans.

**Draw the shape of following**

96. Trapezium

T – 3 min  
S – Understanding elementary shapes

Ans.

97. Parallelogram

T – 3 min  
S – Understanding elementary shapes

Ans.

98. Find the least number which when divided by 15, 28, and 32 leaves a remainder of 9 in each case.

T – 1 min  
S – Playing with numbers

Ans.

99. Two tankers contains 1120 liters and 920 litres of minerals respectively. find the maximum capacity of a container which can measure the mineral of both the tankers when used an exact number of times.

T – 1 min  
S – Playing with numbers

Ans.

100. The product of HCF and LCM of two numbers is 192. If one number is 16. Find the other number.

T – 1 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