

Grade 07 Unit 06

Maths

Course Outline

◉ Summative I

MAT

(Monthly Achievement Tests)

Short Code: 447308

Test ID: NMM07U060



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. Convert $\frac{2}{3}$ in to percentage.

- (a) 60% (b) 66.66%
(c) 50% (d) 40%

T – 1 min
S – Comparing quantities

Ans.

2. The 0.8% into the fraction is equal to

- (a) $\frac{1}{25}$ (b) $\frac{1}{5}$
(c) $\frac{1}{125}$ (d) 8

T – 1 min
S – Fractions and decimals

Ans.

3. $3.8 + 8.7 =$

- (a) $\frac{21}{2}$ (b) $\frac{23}{2}$
(c) $\frac{25}{2}$ (d) $\frac{27}{2}$

T – 1 min
S – Fractions and decimals

Ans.

4. $0.\overline{2} + 32.\overline{21} =$

- (a) $\frac{3111}{98}$ (b) $\frac{3211}{99}$
(c) $\frac{3211}{98}$ (d) $\frac{3411}{97}$

T – 1 min
S – Fractions and decimals

Ans.

5. Simplify: $7.452 - 12.36 + 4.068:$

- (a) $\frac{-20}{21}$ (b) $\frac{-20}{25}$

T – 1 min
S – Fractions and decimals

(c) $\frac{-20}{23}$

(d) $\frac{-21}{25}$

Ans.

6. How much less than -2 is -7 ?

(a) -5

(b) 5

(c) 4

(d) 6

T – 1 min

S – Integers

Ans.

7. By what number should $1\frac{1}{2}$ be multiplied to get $\frac{5}{6}$?

(a) $\frac{5}{3}$

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

(c) $\frac{5}{9}$

(d) $1\frac{4}{5}$

T – 1 min

S – Fractions and decimals

Ans.

8. Which of the following statements is true?

(a) $-11 > -7$

(b) $-11 < -7$

(c) -11 and -7 can not be compared

(d) None of these

T – 1 min

S – Integers

Ans.

9. $0.8 \times ? = 0.0004$

(a) 0.5

(b) 0.005

(c) 0.0005

(d) 5

T – 1 min

S – Fractions and decimals

Ans.

10. $(-95) \div (-5)$

(a) -19

(b) 18

(c) 19

(d) -18

T – 1 min

S – Integers

Ans.

True or False

11. The smallest integer is zero.

T – 1 min

S – Integers

Ans.

12. The sum of two negative integers is a negative integer.

T – 1 min

S – Integers

Ans.

13. Multiplication of integers is associative.

T – 1 min
S – Integers

Ans.

14. Reciprocal of $1\frac{3}{4}$ is $1\frac{4}{3}$.

T – 1 min
S – Fractions and decimals

Ans.

15. The product of a positive and a negative integer is negative.

T – 1 min
S – Integers

Ans.

16. $\frac{1}{0.2} = 5$

T – 1 min
S – Fractions and decimals

Ans.

17. Reciprocal of $2\frac{5}{6}$ is $\frac{17}{6}$.

T – 1 min
S – Fractions and decimals

Ans.

18. Reciprocal of a non-zero fraction $\frac{a}{b}$ is $\frac{b}{a}$.

T – 1 min
S – Fractions and decimals

Ans.

19. The two line segment which have same length are said to be equal.

T – 1 min
S – Lines and angles

Ans.

20. The acute angle is greater than 120° .

T – 1 min
S – Lines and angles

Ans.

Fill in the blanks

21. _____ percentage is Rs. 15 of Rs. 120.

T – 1 min
S – Comparing quantities

Ans.

22. $-36 \div \underline{\hspace{2cm}} = -4$

T – 1 min
S – Integers

Ans.

23. $-72 + \underline{\hspace{2cm}} = -72$

T – 1 min
S – Integers

Ans.

24. The additive inverse of 0 is

T – 1 min
S – Integers

Ans.

25. $1.85 \underline{\hspace{2cm}} 1.805$

T – 1 min
S – Fractions and decimals

Ans.

26. Two line segments are congruent if .

T – 1 min
S – Congruence of triangle

Ans.

27. Among two congruent angles one has a measure 70° . The measure of the other angle is .

T – 1 min
S – Congruence of triangle

Ans.

28. $35\% + \underline{\hspace{2cm}}\% = 100\%$

T – 1 min
S – Comparing quantities

Ans.

29. objects are exact copies of one another.

T – 1 min
S – Congruence of triangle

Ans.

30. The method of examines the congruence of plan figures.

T – 1 min
S – Congruence of triangle

Ans.

Answer the following questions:

31. Simplify $63.7 - 27.58 + 73.4 - 35.66$

T – 1 min
S – Fractions and decimals

Ans.

32. Solve $\frac{1}{2}x + \frac{1}{4}x = \frac{1}{4}x + \frac{3}{2}$.

T – 1 min
S – Linear equations in one variable

Ans.

33. Solve $0.3x + 0.4 = 0.28x + 1.16$.

T – 1 min
S – Simple equations

Ans.

34. Solve $6x + \frac{1}{5} = 3 + x$

T – 1 min
S – Simple equations

Ans.

35. The sum of the two integers is -45 . If one of them is -21 . Find the other?

T – 1 min
S – Integers

Ans.

36. The cost of a pen is Rs. $15\frac{1}{2}$ and that of a pencil is $3\frac{2}{4}$. Which costs more and by how much?

T – 1 min
S – Fractions and decimals

Ans.

37. A cloth of length $5\frac{1}{2}$ is cut into 4 pieces of equal length. Find the length of each piece?

T – 1 min
S – Fractions and decimals

Ans.

38. Anu purchased a lunch box for Rs. 35.75 and a pencil box for Rs. 5.50. She gave Rs. 100 to the shopkeeper. What amount did she get back?

T – 1 min
S – Fractions and decimals

Ans.

39. Find the product $0.476 \times 5.4 \times 0.002$

T – 1 min
S – Fractions and decimals

Ans.

40. Cost of a pen is Rs. 32.45. Find the cost of 25 pens.

T – 1 min
S – Fractions and decimals

Ans.

41. Cost of 28 bags is Rs. 3472. Find the cost of each bag.

T – 1 min
S – Simple equations

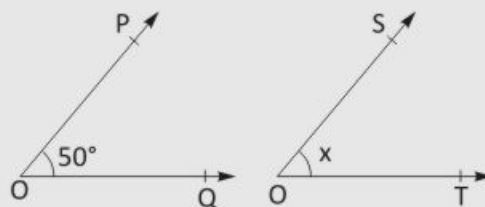
Ans.

42. A number when added to its half gives 66. Find the number.

T – 1 min
S – Simple equations

Ans.

43. In the figure two angles $\angle POQ$ and $\angle SOT$ are complementary angles, then find the value of $\angle SOT$.

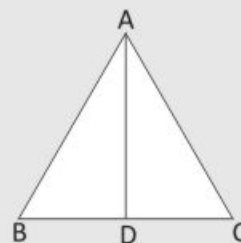


T – 1 min
S – Lines and angles

Ans.

44. In the fig. $AB = AC$ and D is the mid point of \overline{BC}
 (a) State the three pairs of equal parts in $\triangle ADB$ and $\triangle ADC$.
 (b) Is $\triangle ADB \cong \triangle ADC$?
 (c) Is $\angle B = \angle C$? Why?

T – 1 min
S – Congruence of triangles



Ans.

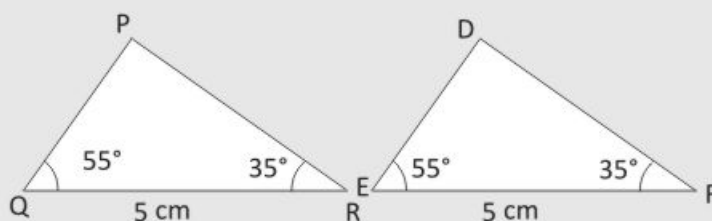
45. Two supplementary are in the ratio of 2 : 3. Find both the angles.

T – 1 min
S – Comparing quantities

Ans.

46. $\triangle PQR$ and $\triangle DEF$ are congruent. True or False?

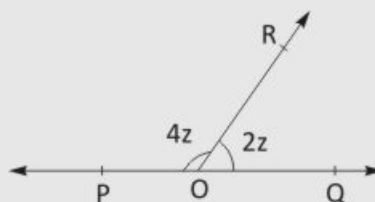
T – 1 min
S – Congruence of triangles



Ans.

47. In fig $\angle POR$ and $\angle QOR$ form linear pair. Find the value of z .

T – 1 min
S – Lines and angles



Ans.

48. Simplify each of the following:
(a) $6.031 - 3.841 - 3.461 + 0.845$
(b) $9.089 - 10.3 + 12.137 - 8.956$

T	- 1 min
S	- Fractions and decimals

Ans.

49. Multiply:
(a) 3.467×8 (b) 6.538×9

T	- 1 min
S	- Fractions and decimals

Ans.

50. Find the product:
(a) 0.12×0.8
(b) 0.225×0.13

T	- 1 min
S	- Fractions and decimals

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. Two numbers are in the ratio 5 : 6. If 8 is subtracted from each the ratio becomes 4 : 5. Find the numbers.

T – 1 min
S – Comparing quantities

Ans.

52. If $A:B = 7 : 8$ and $B:C = 16 : 14$. Find $A:C$?

T – 1 min
S – Comparing quantities

Ans.

53. If 36 men can finish a piece of work in 25 days. How many days will 20 men take to do it?

T – 1 min
S – Comparing quantities

Ans.

54. If 25 metres of cloth costs Rs. 1575. How many metres of it can be bought for Rs. 2016?

T	– 1 min
S	– Comparing quantities

Ans.

55. Convert the following decimal into percentage.
(i) 0.5 (ii) 0.02 (iii) 0.76

T	– 1 min
S	– Comparing quantities

Ans.

56. Find 16% of 125.

T	– 1 min
S	– Comparing quantities

Ans.

57. If 15% of the workers in a factory are females and the number of male workers is 289. Find the total number of workers in the factory?

T	– 1 min
S	– Comparing quantities

Ans.

58. A number is increased by 20% and then the increased number is decreased by 20%. Find the net increase or decrease percent.

T	– 1 min
S	– Comparing quantities

Ans.

59. Mr. Narayan saves 12% of his salary. If he receives Rs. 24,600 per month as salary. Find his monthly expenditure.

T	– 1 min
S	– Comparing quantities

Ans.

60. Out of her total monthly income, Mrs Saxena spends 40% on house rent and 60% of the rest on house hold expenses. If she saves Rs. 6300 per month. What is her total monthly income?

T	– 1 min
S	– Comparing quantities

Ans.

61. A fruit seller had some apples. He sells 60% of them and still has 480 apples. How many apples had he in all?

T – 1 min
S – Comparing quantities

Ans.

62. $\frac{4}{5}$ as rate percent is

T – 1 min
S – Comparing quantities

Ans.

63. Find the selling price of an article for which cost price is Rs. 650 and gain percentage is 6%.

T – 1 min
S – Comparing quantities

Ans.

64. A bicycle was purchased for Rs. 570 and sold for Rs. 600. Find the gain and gain percentage.

T	– 1 min
S	– Comparing quantities

Ans.

65. A man sold two radios at Rs. 924 each. On one he gains 20% and on the other he loses 20%. How much does he gain or lose in the whole transaction? Also find the gain or loss percent in the whole transaction?

T	– 1 min
S	– Comparing quantities

Ans.

66. The population of a town increases 8% annually. If its present population is 142560. What was it a year ago?

T	– 2 min
S	– Comparing quantities

Ans.

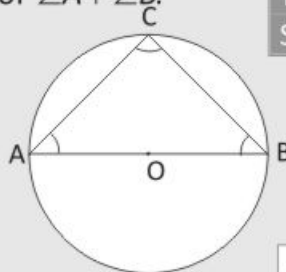
67. Find the length of the largest pole that can be placed in a hall 10 m long, 10 m wide and 5 m high.

T – 2 min
S – Lines and angles

Ans.

68. In the given figure. Find the measure of $\angle A + \angle B$.

T – 2 min
S – Lines and angles



Ans.

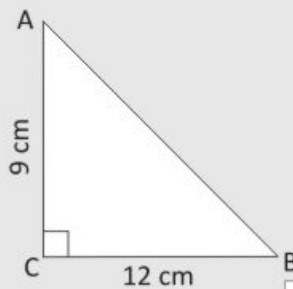
69. Three angles of a quadrilateral are 110° , 60° and 40° . Find the fourth angle.

T – 2 min
S – Lines and angles

Ans.

70. $\triangle ABC$ is right angles at C. If $AC = 9$ cm and $BC = 12$ cm. Find the length AB , using Pythagoras theorem.

T – 2 min
S – Triangle



Ans.

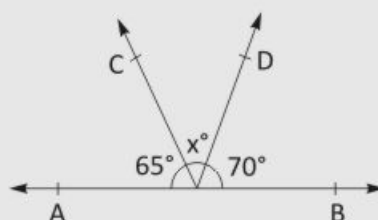
71. If the square of the hypotenuse of an isosceles right triangle is 200 cm^2 . Find the length of each side.

T – 1 min
S – Triangle

Ans.

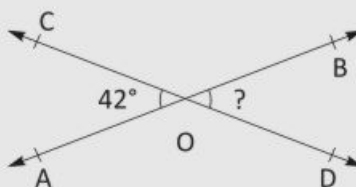
72. Find x .

T – 1 min
S – Lines and angles



Ans.

73. In the given figure, two straight lines AB and CD intersect at a point O . Find $\angle BOD$.



T – 1 min
S – Lines and angles

Ans.

74. Find the hypotenuse? $a = 14 \text{ cm}$, $b = 48 \text{ cm}$.

T – 1 min
S – Triangle

Ans.

75. A quadrilateral has all four angles of the same measure. What is the measure of each?

T – 2 min
S – Lines and angles

Ans.

76. A coin is tossed 100 times and head is obtained 59 times. On tossing a coin at random, find the probability of getting a head.

T – 2 min
S – Data handling

Ans.

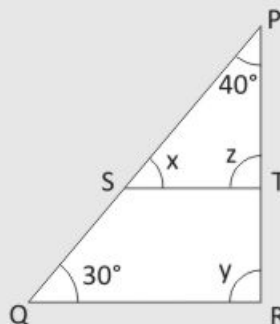
77. The weight of 10 students (in kg.) are 40, 52, 34, 47, 31, 35, 48, 41, 44, 38. Find the median weight.

T – 2 min
S – Data handling

Ans.

78. In figure S and T are points on PQ and PR in such a manner that $ST \parallel QR$. If $\angle Q = 30^\circ$ and $\angle P = 40^\circ$. Find the value of x , y and z .

T – 2 min
S – Lines and angles



Ans.

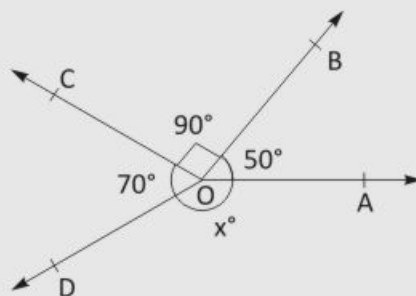
79. A survey of 150 girls showed that 63 like tea while 87 dislike it. Out of these girls, one girl is chosen at random. What is the probability that the chosen girl
(i) likes tea? (ii) dislikes tea?

T – 2 min
S – Data handling

Ans.

80. In the given figure, rays OA , OB , OC and OD are such that $\angle AOB = 50^\circ$, $\angle BOC = 90^\circ$, $\angle COD = 70^\circ$ and $\angle AOD = x^\circ$. Then the value of x is

T – 2 min
S – Lines and angles



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. Reenu spends $\frac{4}{5}$ of her income on household expenses. Her monthly income is Rs. 15000. How much does she save every month?

T – 1 min
S – Fractions and decimals

Ans.

82. Rohan takes $5\frac{4}{5}$ minutes to take a complete round of a circular park. How much time will be take to make 15 rounds?

T – 1 min
S – Fractions and decimals

Ans.

83. Amit weighs 35 kg. His sister Kavita's weight is $\frac{3}{5}$ of Amit's weight. How much does Kavita weight?

T – 1 min
S – Fractions and decimals

Ans.

84. A car covers a certain distance at a uniform speed of $66\frac{2}{3}$ km per hour. How much distance will it cover in 9 hours?

T – 2 min
S – Fractions and decimals

Ans.

85. If the cost of $5\frac{2}{5}$ litres of milk is Rs. $101\frac{1}{4}$. Find its cost per litre.

T – 2 min
S – Fractions and decimals

Ans.

86. If 15% of workers in a factory are females and the number of male workers is 272 find the total number of workers in the factory.

T – 2 min
S – Comparing quantities

Ans.

87. The total weight of some bags is 1743 kg. If each bag weights 49.8 kg. How many bags are there?

T – 2 min
S – Fractions and decimals

Ans.

88. Find 2 consecutive natural numbers, whose sum is 63.

T – 2 min
S – Simple equations

Ans.

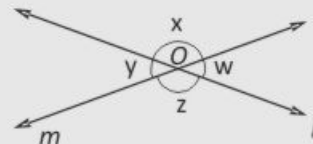
89. In a $\triangle ABC$, if $\angle A = 72^\circ$ and $\angle B = 63^\circ$. Find the measure of $\angle C$.

T – 2 min
S – Lines and angles

Ans.

94. In figure two lines l and m intersect at point ' O ' and form the angles as shown in figure. If $w = 40^\circ$. Find the value of w, x, y and z .

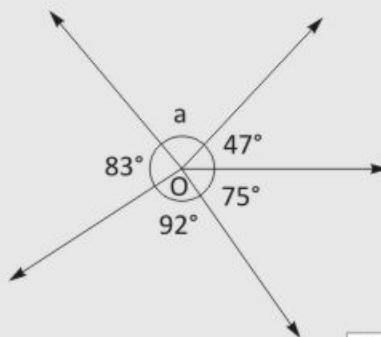
T – 3 min
S – Lines and angles



Ans.

95. Find a from the following figure.

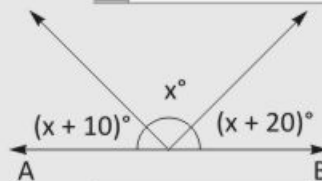
T – 3 min
S – Lines and angles



Ans.

96. In figure, find the angles.

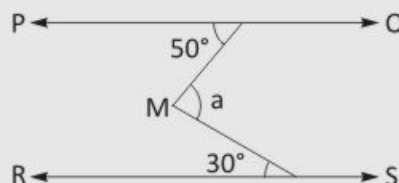
T – 3 min
S – Lines and angles



Ans.

97. In figure, $PQ \parallel RS$. Find the value of ' a '.

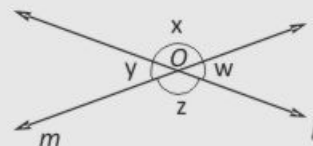
T – 3 min
S – Lines and angles



Ans.

94. In figure two lines l and m intersect at point ' O ' and form the angles as shown in figure. If $w = 40^\circ$. Find the value of w, x, y and z .

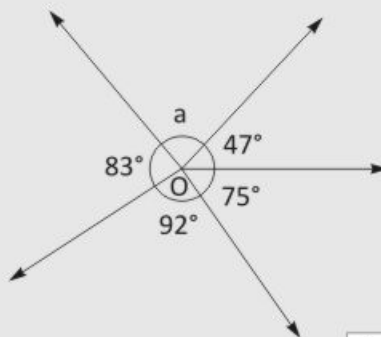
T – 3 min
S – Lines and angles



Ans.

95. Find a from the following figure.

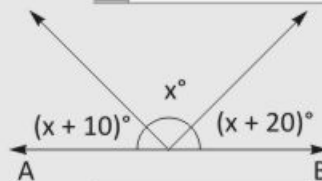
T – 3 min
S – Lines and angles



Ans.

96. In figure, find the angles.

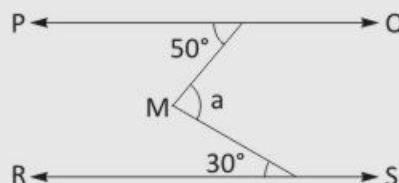
T – 3 min
S – Lines and angles



Ans.

97. In figure, $PQ \parallel RS$. Find the value of ' a '.

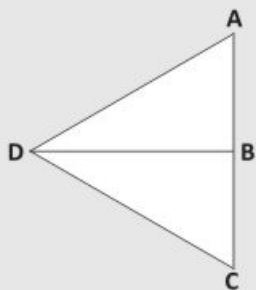
T – 3 min
S – Lines and angles



Ans.

Complete the congruence statement

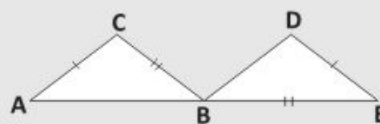
98. Given B is a mid point of AC and $AD = CD$



T – 6 min
S – Congruence of triangles

Ans.

99. Given $AC = ED$, $BC = BE$ and $AB = BD$



Ans.

100. 'A' team won 8 games this year against 12 games won last year. What is the percent decrease ?

T – 3 min
S – Comparing quantities

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