

BRAIN INTERNATIONAL SCHOOL

CLASS – VIII

TERM – II

SUB :- MATHS REVISION SHEET

2018-19

Chapter - 1 : Rational Numbers

1. Express $\frac{-48}{60}$ as a rational number with denominator 5.
2. Convert $\frac{-195}{275}$ in the standard form
3. Arrange $\frac{-4}{7}$, $\frac{-9}{14}$, $\frac{13}{-28}$ and $\frac{-23}{42}$ in ascending order.
4. Represent $\frac{-7}{3}$ on the number line.
5. The sum of two rational numbers is -2. If one of the numbers is $\frac{-14}{5}$, find the other.
6. What number should be subtracted from $\frac{-2}{3}$ to get $\frac{-1}{6}$?
7. A basket contains three types of fruits weighing $\frac{58}{3}$ kg in all. If $\frac{73}{9}$ kg of these be apples, $\frac{19}{6}$ kg be oranges and the rest pears. What is the weight of the pears in the basket?
8. The area of a room is $\frac{261}{4}$ m². If its breadth is $\frac{87}{16}$ meters, what is its length?
9. Divide the sum of $\frac{65}{12}$ and $\frac{8}{3}$ by their difference.
10. Simplify: $(\frac{3}{11} \times \frac{5}{6}) - (\frac{9}{12} \times \frac{4}{3}) + (\frac{5}{13} \times \frac{6}{15})$

Chapter - 2 : Linear Equations In One Variable

1. Solve the equation $\frac{1-9y}{19-3y} = \frac{5}{8}$
2. The sum of the digits of a two digit number is 12. If the new number formed by reversing the digits is greater than the original number by 18, find the original number.
3. One of the angles of a triangle is equal to the sum of the other two angles. If the ratio of the other two angles is 4:5, find the angles of the triangle.
4. The sum of 5 consecutive numbers is 140. Find the numbers.
5. Bansi has 3 times as many two-rupee coins as he has five-rupee coins. If he has in all a sum of ₹ 77, how many coins of each denomination does he have?
6. Solve : $5x - 2(2x - 7) = 2(3x - 1) + \frac{7}{2}$
7. Jane is 6 years older than her younger sister. After 10 years, the sum of their ages will be 50 years. Find their present ages.

Chapter - 7 : Cubes and Cube Roots

1. Find out if the following are perfect cubes.
(i) 250 (ii) 5832
2. Find the smallest number by which 1944 must be multiplied so that the product is a perfect cube.
3. Find the smallest number by which 4394 must be divided so that the quotient is a perfect cube.
4. Evaluate: $\sqrt[3]{\frac{-1728}{2744}}$
5. Find the cube root of 13824 by Prime Factorisation method.

Chapter - 8 : Comparing Quantities

- Express 5.6 m to 28 cm in the simplest form.
- Find the value of 'x' if 9, 21, 33, x are in proportion.
- Mike needs 30% to pass. If he scored 212 marks and falls short by 13 marks, what was the maximum marks he could have got?
- A number is increased by 40 % and then decreased by 40 %. Find the net increase or decrease per cent.
- Ron scored 344 marks out of 400 marks and his elder brother Ben scored 582 marks out of 600 marks. Who scored percentage is better?
- Hilary bought two pairs of jeans for ₹ 725 each. She sold one of them at a gain of 8% and the other at a loss of 4%. Find her gain or loss per cent in the whole transaction.
- A grocer bought tea which cost ₹ 4500. He sold one-third of tea at a gain of 10%. At what gain per cent must the remaining tea be sold to have a gain of 12% on the whole?
- A man deposited ₹ 1000 in a bank. In return he got ₹ 1331. Bank gave interest 10% per annum. How long did he kept the money in the bank?
- At what rate per cent per annum will a sum of ₹ 7500 amount to ₹ 8427 in 2 years, compounded annually?

Chapter - 9 : Algebraic Expressions and Identities

- Subtract : $2ab + 5bc - 7ac$ from $5ab - 2bc - 2ac + 10abc$
- Simplify: $(\frac{3}{4}x - \frac{4}{3}y)^2 + 2xy$
- Expand and evaluate using suitable identity:
 - $(x^2 + y^2)(x^2 - y^2)$
 - $(995)^2$
 - 105×95
 - $(9.7)^2 - (0.3)^2$

Chapter - 14 : Factorisation













- Factorise the following:
 - $63p^2q^2r^2s - 9pq^2r^2s^2 + 15p^2qr^2s^2 - 60p^2q^2rs^2$
 - $4x^2 + 12x + 9$
 - $9x^2 - 1$
 - $4x^2 - 49y^2$
 - $m^4 - 256$
 - $6xy - 4y + 6 - 9x$
 - $ab(x^2 + y^2) - xy(a^2 + b^2)$
- Divide $44(x^4 - 5x^3 - 24x^2)$ by $11x(x - 8)$
- Find the factors of $y^2 - 7y + 12$.

Chapter - 10 : Visualising Solid Shapes

- Draw the front, top and side view of



2. Complete the given table:

S. No	Solid	Shape of Solid	Number of faces F	Number of Vertices V	Number of edges E	F + V	E + 2
a.	Cuboid						
b.	Triangular Pyramid						
c.	Square Pyramid						
d.	Rectangular Pyramid						
e.	Pentagonal Pyramid						
f.	Hexagonal Pyramid						
g.	Triangular Prism						
h.	Square Prism						
i.	Cube						
j.	Pentagonal Prism						
k.	Octagonal Prism						
l.	Heptagonal Prism						

3. Using Euler's formula, find the value of the unknown in the given table:

Faces	7	y	9	p	6	8
Vertices	10	12	z	6	q	11
Edges	x	18	16	12	12	r

Chapter - 11 : Mensuration

- How many tiles whose length and breadth are 13 cm and 7 cm respectively are needed to cover a rectangular region whose length and breadth are 520 cm and 140 cm?
- How many tiles whose length and breadth are 13 cm and 7 cm respectively are needed to cover a rectangular region whose length and breadth are 520 cm and 140 cm?
- The area of a trapezium is 384cm^2 . Its parallel sides are in the ratio 3 : 5 and the perpendicular distance between them is 12 cm. Find the length of each of the parallel sides.
- If the volume of a room is 792 m^3 and the area of the floor is 132 m^2 , find the height of the room.
- A wall has to be built with length 8 m, thickness 3 m and height 5 m. Find the volume of the wall in cubic cm.
- ΔABD and parallelogram ABCD are on the same base AB. If base and altitude of the parallelogram are 15 cm and 10 cm, find the area of the triangle.

- The floor of building consists of 2000 tiles which are rhombus shaped and each of its diagonals are 40 cm and 25 cm in length. Find the total cost of polishing the floor, if the cost per m² is ₹ 5.
- Two equal cubes with sides 6cm are placed one above the other, forming a cuboid. Find the total surface area of the cuboid thus formed.
- A rectangular piece of paper of width 20cm and length 44cm is rolled along its width to form a cylinder. What is the curved surface area of the cylinder so formed?
- The diameter of the base of a right circular cylinder is 28cm and its height is 21cm. find its volume.

Chapter - 13 : Direct and Inverse Proportions

- Find the value of p, q and r if it is given that A and B vary inversely.

A	6	8	q	25
B	18	p	39	r

- If 25 metres of cloth costs ₹ 337.50, then
 - What will be the cost of 40 metres of the same type of cloth?
 - What will be the length of the cloth bought for ₹ 810?
- A swimming pool can be filled in 4 hours by 8 pumps of the same type. How many such pumps are required if the pool is to be filled in $2\frac{2}{3}$ hours?

Chapter - 15 : Introduction to Graphs

- Draw a line passing through (2, 1) and (1, 2). Find the coordinates of the points at which this line meets the x-axis and y-axis.
- Plot the following points:
 - A(4,0) B(4,2) C(4,6) D(4,1.5)
 - K(2,4) L(2,5) M(5,5) N(1,5)
- The following table depicts the maximum temperature on the seven days of a particular week. Study the table and draw a line graph for the same.

Day	Sun.	Mon.	Tue.	Wed.	Thrs.	Fri.	Sat.
Temp. (in°C)	25	28	26	32	29	24	31

- The average monthly attendance of a class is given.

Month	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb
Attendance	42	46	30	50	38	20	36	32

Draw the line graph of the data given.

- In which month the average attendance is minimum or maximum?
- In which month the average attendance was less than 40?
- Find the difference between the maximum and minimum average attendance?