BRAIN INTERNATIONAL SCHOOL

SESSION 2024-25

CLASS: VIII **TERM 1 REVISION SHEET** **SUBJECT: MATHEMATICS**

Chapter: Rational Numbers

Q1) What should be subtracted from $\frac{2}{3}$ to get $\frac{-11}{4}$?

Q2) The sum of two rational numbers is $\frac{-13}{5}$. If one of them is $\frac{8}{7}$, find the other.

Q3) If $x = \frac{-2}{5}$, $y = \frac{10}{27}$ and $z = -\frac{15}{16}$, verify that $x \times (y \times z) = (x \times y) \times z$.

Q4) Find using distributive property:

$$(i)\left\{\frac{7}{5}\times\left(\frac{-3}{12}\right)\right\}+\left\{\frac{7}{5}\times\frac{5}{12}\right\} \qquad (ii)\left\{\frac{9}{16}\times\frac{4}{12}\right\}+\left\{\frac{9}{16}\times\frac{-3}{9}\right\}$$

Q5) The product of two rational numbers is $\frac{33}{58}$. If one of them is $\frac{44}{87}$, find the other.

Q6) Divide the sum of $\frac{13}{5}$ and $\frac{-12}{7}$ by the product of $\frac{-31}{7}$ and $\frac{1}{-2}$.

Chapter: Linear Equations in One Variables

Q1) **MCQ:** The denominator of a rational number is greater than its numerator by 3 then the rational number is

(a) x/(x+3) (b) (x+3)/x (c) (x−3)/x (d) 3/(x+3)

Q2) After 14 years, I shall be three times as old as I was 4 years ago. What is my present age?

Q3) One fourth of total number of students in a class are in Math lab, one third are in Physics lab, one sixth are in Chemistry lab and 10 are in Biology lab. How many students are there in the class?

Q4) Two equal sides of a triangle are 4m less than three times the third side. Find the dimensions of the triangle if the perimeter of the triangle is 55m.

Q5) Solve the equations:

$$\text{(i)}\ \frac{3x-7}{5}=\frac{1-x}{-3} \qquad \text{(ii)}\ \frac{y+1}{y-1}=\frac{2y+3}{2y+5}$$

Q6) The sum of two consecutive multiples of 5 is 55. Find these multiples.

Q7) Check whether the value given in the brackets is a solution to the given equation

$5 - 3(5y + 2) = 4(7 - 3y) + 1$ [for $y = -10$]

Chapter: Understanding Quadrilaterals

Q1) **MCQs**

(i) The measure of each interior angle of a regular polygon of 12 sides is:

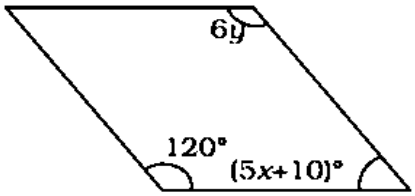
(a) 150˚ (b) 140˚ (c) 130˚ (d) 70˚

(ii) Find the number of sides of a regular polygon whose each exterior angle has measure 24°.

(a) 15 (b) 24 (c) 8 (d) 7

Q2) Two angles of a quadrilateral are of 90˚ each. The third and the fourth angle are in the ratio 2: 3. Find the measure of the third and the fourth angle.

Q3) In the given parallelogram the three angles are of measures 120˚, $6y$˚ and $(5x+10)$˚. Find the values of x and y.



Q4) The perimeter of a parallelogram is 150 cm. One of its sides is greater than the other by 25cm. Find the length of all the sides of the parallelogram.

Q5) Diagonal BD of rhombus ABCD is equal to one of its sides BC. Find the angles of the rhombus. Draw the figure in support of your answer.

Q6) State true or false. Also justify your answer

(i) Every trapezium is a square.

(ii) All squares are rectangles.

(iii) Sum of all the angles of a trapezium is 360˚.

(iv) All squares are rhombuses.

(v) All parallelograms are rectangles.

Chapter: Data Handling

Q1) A die is thrown once. Find the probability of getting a number greater than or equal to 3.

Q2) A class consists of 11 boys and 9 girls. A student is to be selected for social work. Find the probability that

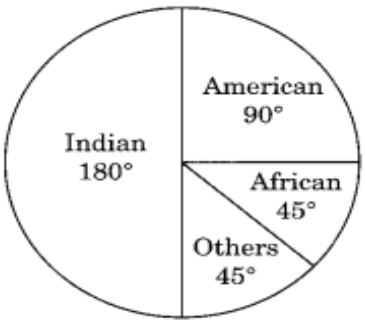
(i) a girl is selected

(ii) a boy is selected

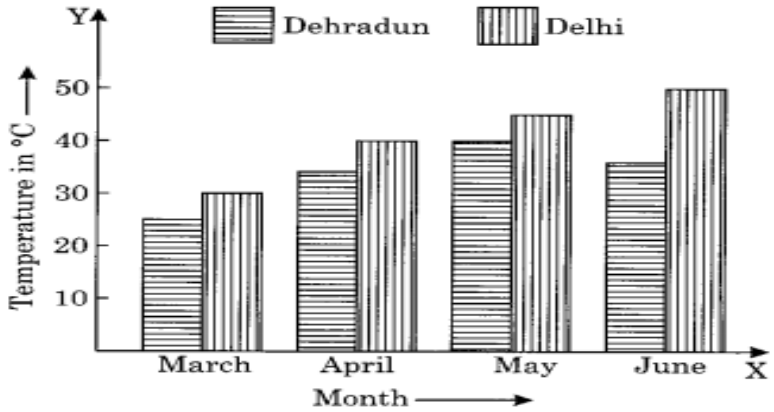
Q3) The following pie chart depicts the percentage of students, nationwide. What is the percentage of

(i) Indian students

(ii) Non-African students?



Q4) The double bar graph shows the average monthly temperatures of two cities over 4 months period. Read the graph carefully and answer the questions given below:



(i) What does each 1 cm block on the vertical axis represent?

(ii) What was the average monthly temperature in Dehradun in (a) March (b) April?

(iii) What was the average monthly temperature in Delhi for the whole 4 months?

(iv) In which month was the difference between the temperature of Delhi and Dehradun maximum and how much?

Q5) A bag contains 144 coloured balls represented by the following table. Draw a pie chart to show this information.

Colour	Number of balls
Red	12
Yellow	18
Blue	28
Green	42
White	44

Q6) Nishant's monthly income is ₹ 12000. He spends this money on different items as shown below. Represent the given information in the form of a Pie-Chart.

ITEM	FOOD	HOUSE RENT	EDUCATION	CLOTHING	ENTERTAINMENT
AMOUNT SPENT (₹)	3000	5000	2000	1000	1000

Q7) Numbers 1 to 10 are written on ten separate cards such that one number on one slip. These are mixed well and one slip is chosen from the box without looking into it. What is the probability of

(a) getting a card on which 6 is written?

(b) getting a card having two-digit number on it?

(c) getting a multiple of 5?

(d) getting a number more than 8?

Chapter: Squares and Square Roots

Q1) **MCQ:** The next two numbers in the number pattern 1, 4, 9, 16, 25 ... are

(a)35, 48 (b) 36, 49 (c) 36, 48 (d) 35,49

Q2) Find the smallest perfect square divisible by 3, 4, 5 and 6.

Q3) Find the value of $\sqrt{248 + \sqrt{52 + \sqrt{144}}}$.

Q4) Given that $\sqrt{4096}$ = 64, the value of $\sqrt{4096} + \sqrt{40.96}$

Q5) Find the smallest number by which 3645 should be divided so as to get a perfect square. Also, find the square root of the number so obtained.

Q6) Find the least number that must be added to 1500 so as to get a perfect square. Also find the square root of the perfect square.

Q7) Rahul walks 12m north from his house and turns west to walk 35m to reach his friend's house. While returning, he walks diagonally from his friend's house to reach back to his house. What distance did he walk while returning?

Chapter: Cubes and Cube Roots

Q1) **MCQ**: If m is the cube root of n, then n is

(a) m^3 (b) $\sqrt{m}$ (c) $\frac{m}{3}$ (d) $\sqrt[3]{m}$

Q2) Find the cube root of 13824 by Prime Factorisation method.

Q3) Three numbers are in the ratio 4:3:2. The sum of their cubes is 792. Find the numbers.

Q4) Is 400 a perfect cube? If not, find the smallest natural number by which 400 should be multiplied so that the product is a perfect cube.

Q5) The volume of a cube is 125 cm^3. What will be the volume of another cube whose sides are double of this cube?

Q6) Evaluate:

(i) $\sqrt[3]{27} + \sqrt[3]{0.008} + \sqrt[3]{0.064}$
(ii) $\sqrt[3]{0.1 \times 0.1 \times 0.1 \times 13 \times 13 \times 13}$
(iii) $\sqrt[3]{-8 \times 17 \times 17 \times 17}$

Q7) **Case-Study Based Question**

Mohan has to prepare a physics project in the form of a cubical box for a social work campaign but he had a cuboidal box of sides 4 cm, 2 cm and 4 cm. Now he has to convert it in the form of cube so that he can complete his project. For this, he needed more cuboidal boxes of same dimensions so that he can prepare the cube. Based of the given information answer the following questions:

(a) What is the volume of the cuboidal box?
(b) How many more cuboids are needed to make a cube?
(c) What will be the length of each side of the cube so formed?

Chapter: Comparing Quantities

Q1) **MCQs**

(i) If the cost of a TV is ₹3350 and sales tax of 10% is charged on it then the bill amount will be

(a) ₹3500 (b) ₹3725 (c) ₹3850 (d) ₹ 3685

(ii) In a certain exam of 300 marks, 150 is the qualifying marks. Rohit scored 120 out of 300. In order to qualify the exam what percentage of the obtained marks he must need to secure more?

(a) 10% (b) 25% (c) 30% (d) 50%

Q2) **DIRECTION:** In the question a statement of **Assertion(A**) is followed by a statement of **Reason(R).** Choose the correct option.

(a) Both Assertion and Reason are true and Reason is a correct explanation of Assertion.

(b) Both Assertion and Reason are true but Reason is not a correct explanation of Assertion.

(c) Assertion is true and Reason is false

(d) Assertion is false and Reason is true.

Assertion (A): The fraction $\frac{4}{5}$ when changed to percentage it becomes 80%.

Reason (R): A fraction represents a part of the whole or, more generally, any number of equal parts.

Q3) Express $1\frac{3}{5}$ as a percentage.

Q4) A person goes shopping and spends 75% of his money. If he is now left with ₹600, find out how much he had in the beginning.

Q5) Find the amount if ₹2,000 is invested for 2 years at 4% p.a. compounded annually.

Q6) If 72% of 25 students like mathematics, find out the number of students who do not like mathematics?

Q7) If the marked price of an article is ₹ 80 and it is sold at ₹ 76, then find the discount rate.