HOLIDAY HOMEWORK
Class- VIII th   Sub- Maths

1. Revise Ch-1 and 7 for UT.

2. Prepare a project file on properties and operations of rational numbers.

3. Write squares of first twenty natural numbers on chart paper.

4. Draw different types of quadrilaterals on chart paper and also write their properties.

5. Solve given worksheets in your note book.

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Work sheet

Section A

I. MULTIPLE CHOICE QUESTIONS (MCQ)

For each question, there are four Options, out of which one is correct. Choose the correct one :

1. If both numerator and denominator of the fraction $\frac{2}{5}$ are divided by 2, then the fraction

   (a) becomes greater   (b) becomes lesser   (c) becomes 1   (d) remains same

2. If the numerator of $\frac{7}{8}$ is increased by 1, the fraction becomes

   (a) lesser   (b) greater   (c) a whole   (d) $\frac{8}{9}$

3. Which of the following is a vulgar fraction ?

   (a) $\frac{3}{10}$ (b) $\frac{10}{3}$ (c) $\frac{13}{10}$ (d) $\frac{23}{100}$

4. Which of the following is a decimal fraction ?

   (a) $\frac{2}{5}$ (b) $\frac{10}{13}$ (c) $\frac{100}{120}$ (d) $\frac{5}{10}$

5. The reciprocal of $3\frac{2}{3}$ is

   (a) $3\frac{3}{2}$ (b) $\frac{11}{3}$ (c) $2\frac{3}{3}$ (d) $\frac{3}{11}$

6. By what number should $2\frac{3}{5}$ be multiplied to get $1\frac{6}{7}$?

   (a) $2\frac{5}{7}$ (b) $\frac{1}{7}$ (c) $1\frac{1}{7}$ (d) $\frac{5}{7}$

7. $4.1 \times 0.1 \times .01 = ?$
   (a) 41   (b) 0.41   (c) 0.041   (d) 0.0041

8. $2.08 \div (.16) = ?$
   (a) 0.13   (b) 13.1   (c) 13   (d) 1.3

9. What should be subtracted from $\frac{-3}{4}$ to get $\frac{1}{6}$?

   (a) $\frac{-1}{12}$ (b) $\frac{11}{12}$ (c) $\frac{1}{12}$ (d) $\frac{-11}{12}$

10. If $\frac{2x}{9} = \frac{16}{-3}$, then the value of x is

    (a) -24 (b) 24   (c) 21   (d) -21

②

II. TRUE / FALSE

1. The sum of a rational number and its additive inverse is 1.

2. Eight pieces of equal size can be cut from a rope 30 m long, each measuring $3\frac{3}{4}$ m.

3. $-\frac{2}{3} < \frac{5}{-12} < \frac{-4}{9}$

4. 1942 mm = 1 m 9 dm 42 cm

5. Nine one-fourths make $2\frac{1}{4}$.

6. 1.27272727 is a rational number.

7. The product of a rational nubmer and its reciprocal is equal to one.

8. Reciprocal of $3\frac{1}{7}$ is $\frac{22}{7}$.

9. $\frac{3}{4}$ of $\frac{2}{3}$ is equal to $\frac{1}{4}$.

10. The value of $\frac{7}{10} + \frac{2}{5} + \frac{3}{2}$ is $\frac{13}{5}$.

III. FILL IN THE BLANKS

1. The multiplicative inverse of $1\frac{1}{2}$ is _____ .

2. The product of $\frac{3}{7}$ and $\frac{2}{3}$ is _____ .

3. Additive inverse of 0 is _____ and that of (– 1) is _____ .

4. Every fraction is a _____ .

5. 1.23040040004 is a _____ number.

6. 2 m 5 mm = 2.005 _____ .

7. Sum of any two rational numbers is a _____ .

8. Every rational number can be expressed as a _____ decimal.

9. A rational number $\frac{p}{q}$ is (–ve), if p and q have _____ signs.

10. If x, y, z are three rational numbers such that $x > y$ and $z < y$, then x _____ z.

IV. MATCH THE COLUMNS

1.

Column A	Column B
(a) $\frac{-3}{5} \times \frac{5}{3}$	(p) $-\frac{4}{9}$
(b) $\frac{-5}{-9} - 1$	(q) $1\frac{1}{2}$
(c) $\frac{-11}{19} + 0$	(r) -1
(d) $\frac{-4}{3} \div \frac{8}{-9}$	(s) $\frac{-11}{19}$

③

2.

Column A	Column B
(a) $4\dfrac{5}{8}$	(p) 390 cm
(b) 3.9 m	(q) 4.625
(c) 1810 millilitres	(r) $2\dfrac{6}{7}$
(d) $7\dfrac{1}{7} \div 2\dfrac{1}{2}$	(s) 1.81 litres

Section B

I. SHORT AND LONG ANSWER TYPE QUESTIONS

1. Find the product :

(i) $\dfrac{2}{3} \times \dfrac{4}{5}$ (ii) $\dfrac{1}{5} \times \dfrac{1}{5} \times \dfrac{1}{2}$ (iii) $\dfrac{5}{6} \times \dfrac{2}{5}$ (iv) $\dfrac{4}{5} \times 6$ (v) $\dfrac{1}{7} \times \dfrac{7}{1}$

2. Find the quotient :

(i) $\dfrac{15}{19} \div \dfrac{5}{3}$ (ii) $\dfrac{2}{9} \div \dfrac{1}{3}$ (iii) $4\dfrac{3}{7} \div \dfrac{3}{5}$ (iv) $12\dfrac{1}{5} \div \dfrac{1}{5}$ (v) $2 \div \dfrac{3}{5}$

3. Find :

(i) $\dfrac{2}{3}$ of 21   (ii) $\dfrac{5}{12}$ of $\dfrac{6}{5}$ (iii) $\left(\dfrac{2}{3} + \dfrac{5}{6}\right) \times \dfrac{4}{5}$

(iv) $\left(\dfrac{1}{3} + \dfrac{5}{6} - \dfrac{1}{6}\right) \div \dfrac{4}{5}$ (v) $\left(\dfrac{4}{5} + \dfrac{3}{6} - \dfrac{5}{12}\right) \div \dfrac{2}{3}$

4. (i) There are 36 people at a party. Suppose $\dfrac{2}{3}$ of the people are men. How many men and women are present in the party ?

(ii) One-half of the population of a city is of females. $\dfrac{2}{7}$ of them live in slums. What fraction of the people live in the slum ?

5. (i) Which rational number is the negative of itself ?
(ii) Is there any rational number which is equal to its reciprocal ?
(iii) Which rational number has no reciprocal ?
(iv) What is the absolute value of zero ?
(v) What is the sum of zero and zero ?
(vi) Which rational number is its own opposite ?
(vii) Is the opposite of each positive rational number a negative rational number ?
(viii) Is the opposite of each negative rational number a positive rational number ?

6. Write two rational numbers between – 1 and 1.

7. Arrange $\dfrac{-7}{8}, \dfrac{-5}{6}, \dfrac{-3}{4}$ in the ascending order.

8. Arrange $\dfrac{-5}{6}, \dfrac{7}{20}, \dfrac{-9}{15}, \dfrac{-7}{20}, \dfrac{3}{5}$ in the descending order.

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9. Simplify :

(i) $\left(\dfrac{-2}{5}\right)\left(\dfrac{-7}{2}\right)\left(\dfrac{2}{14}\right)$

(ii) $\left(\dfrac{3}{2} - \dfrac{4}{5}\right) \times \left(\dfrac{-2}{5}\right)$

(iii) $\left(\dfrac{2}{7} + \dfrac{3}{49}\right)\left(-\dfrac{7}{51}\right)$

(iv) $\dfrac{7}{5} \div \dfrac{4}{7}$

(v) $\left(-\dfrac{14}{13}\right) \div \left(\dfrac{-7}{13}\right)$

(vi) $-\dfrac{36}{12} \div \dfrac{1}{2}$

10. Express each of the following as a decimal :

(i) $\dfrac{2}{3}$ (ii) $-\dfrac{4}{9}$ (iii) $\dfrac{-2}{15}$ (iv) $\dfrac{-5}{6}$ (v) $\dfrac{11}{3}$

11. Solve :

(i) $(4.3 - 2.3) \times 6.3$ (ii) $0.8 \div 2.5$ (iii) $71.56 \times 6.5 \times 3.5$ (iv) $42.86 \times 1.2 \times 0.001$

12. A student in a school pays ₹ $3\dfrac{1}{5}$ as a fund. If the amount collected is ₹ $406\dfrac{2}{5}$, find the number of students in the school.

II. MENTAL MATHEMATICS

1. Which of the two rational numbers, in each of the following pairs, is smaller ?

(i) $\dfrac{-6}{-13}, \dfrac{7}{13}$ (ii) $\dfrac{16}{-5}, 3$ (iii) $\dfrac{-4}{3}, \dfrac{8}{-7}$ (iv) $\dfrac{-12}{5}, -3$

2. Arrange the following rational numbers in descending order :

(i) $\dfrac{-3}{-5}, \dfrac{17}{30}, \dfrac{-8}{5}, \dfrac{7}{10}$

(ii) $\dfrac{7}{8}, \dfrac{64}{16}, \dfrac{36}{-12}, \dfrac{5}{-4}, \dfrac{140}{28}$

(iii) $\dfrac{-3}{10}, \dfrac{17}{-30}, \dfrac{7}{-15}, \dfrac{-11}{20}$

(iv) $\dfrac{2}{5}, \dfrac{-3}{-4}, \dfrac{1}{2}, \dfrac{-7}{-6}, 0$

3. Simplify :

(i) $\dfrac{8}{9} + \left(\dfrac{-11}{6}\right)$ (ii) $\dfrac{-5}{16} + \dfrac{7}{24}$ (iii) $\dfrac{1}{-12} + \left(\dfrac{2}{-15}\right)$ (iv) $\dfrac{-8}{19} + \left(\dfrac{-4}{57}\right)$

4. Using commutativity and associativity of addition of rational numbers, express each of the following as a rational number :

(i) $\dfrac{2}{5} + \dfrac{8}{3} + \left(\dfrac{-11}{15}\right) + \dfrac{4}{5} + \left(\dfrac{-2}{3}\right)$

(ii) $\dfrac{4}{7} + 0 + \left(\dfrac{-8}{9}\right) + \left(\dfrac{-13}{7}\right) + \dfrac{17}{21}$

(iii) $\dfrac{3}{4} + \left(\dfrac{-3}{5}\right) + \left(\dfrac{-2}{3}\right) + \dfrac{5}{8} + \left(\dfrac{-4}{15}\right)$

(iv) $\dfrac{-12}{5} + \left(\dfrac{-7}{20}\right) + \dfrac{3}{14} + \dfrac{1}{7} + \left(\dfrac{-1}{10}\right)$

PUZZLES

1. Solve the following Puzzle by filling in the boxes with correct rational numbers.

$\dfrac{6}{7}$	$+$	?	$=$	$\dfrac{9}{14}$
		$\times$		
	$\dfrac{-5}{6}$	$-$	?	$=$	$\dfrac{-1}{4}$

(Puzzle grid with: $\dfrac{6}{7} + ? = \dfrac{9}{14}$; $\times$; $\dfrac{-5}{6} - ? = \dfrac{-1}{4}$; $=$; $-$; $? = 1\dfrac{1}{14} + ?$; $?$; $= $; -1)

2. What is the sum of a rational number and its additive inverse ?

(5)