

CLASS - 7th

Holiday Homework

subject - Maths

Q(1):  $\rightarrow$  Write and remember table up to 20.Q(2):  $\rightarrow$  Write and remember definition of

(a) Natural Number

(b) Whole Number

(c) Integer

(d) Rational Number

(e) Prime Number

(f) Complex Number

(g) Literal Number

(h) Constant

(i) Variable

(j) Algebraic Expression

(k) Equation

(l) Linear Equation

Q(3): Simplify: —

(i)  $(-400) + 782 + (-1400) + (-82) + 300$

(ii)  $(-273) + (-542) + 900 + (-511)$

(iii)  $(-6) \times \{9 + (-11)\}$

(iv)  $5^2 \times (-1)^{19} \times (-2)^3 \times (-10)^3$

Q(4): — Solve BRAIN TEASERS all questions, of Chapter - 01

Q(5): — Project work: —

(i) Explain Triangle and its type.

(ii) Explain Angle and its type.

(c) What value is exhibited in the above situation?

## BRAIN TEASERS

### 1. A. Tick (✓) the correct option.

(a) The value of  $x$  such that  $\frac{-3}{8}$  and  $\frac{x}{-24}$  are equivalent rational numbers is—

- (i) 64 (ii) -64  
(iii) -9 (iv) 9

(b) Which of the following is a negative rational number?

- (i)  $\frac{-15}{-4}$  (ii) 0  
(iii)  $\frac{-5}{7}$  (iv)  $\frac{4}{9}$

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(c) In the given number line, which of the following rational numbers does the point M represent?



- (i)  $\frac{2}{8}$  (ii)  $\frac{6}{5}$  (iii)  $\frac{2}{3}$  (iv)  $\frac{12}{5}$

(d) Which is the greatest rational number out of  $\frac{5}{-11}$ ,  $\frac{-5}{12}$ ,  $\frac{5}{-17}$ ?

- (i)  $\frac{5}{-11}$  (ii)  $\frac{-5}{12}$   
(iii)  $\frac{5}{-17}$  (iv) cannot be compared

(e) Which of the following rational numbers is the smallest?

- (i)  $\left| \frac{7}{11} \right|$  (ii)  $\left| \frac{-8}{11} \right|$  (iii)  $\left| \frac{-2}{11} \right|$  (iv)  $\left| \frac{-9}{-11} \right|$

### B. Answer the following questions.

(a) Find the average of the rational numbers  $\frac{4}{5}$ ,  $\frac{2}{3}$ ,  $\frac{5}{6}$ .

(b) How will you write  $\frac{12}{-18}$  in the standard form?

(c) How many rational numbers are there between any two rational numbers?

(d) On the number line, the rational number  $\frac{-5}{-7}$  lies on which side of zero?

(e) Express  $\frac{-7}{-8}$  as a rational number with denominator 40.

### 2. State whether the following statements are true. If not, then give an example in support of your answer.

(i) If  $\frac{p}{q} > \frac{r}{s}$  then  $\left| \frac{p}{q} \right| > \left| \frac{r}{s} \right|$

(ii) If  $|x| = |y|$  then  $x = y$

(iii)  $\frac{p}{q}$  is a non-zero rational number in standard form. It is necessary that rational number  $\frac{q}{p}$  will also be in standard form.

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**3. Represent  $5\frac{1}{3}$  and  $\frac{-29}{4}$  on a number line.**

**4. Arrange the following rational numbers in descending order.**

$\frac{-3}{10}$ ,  $\frac{-7}{-5}$ ,  $\frac{9}{-15}$ ,  $\frac{18}{30}$

**5. On a number line, what is the length of the line-segment joining,**

(i) 3 and -3?

(ii)  $\frac{1}{2}$  and  $\frac{-1}{2}$ ?

(iii)  $\frac{1}{2}$  and  $2\frac{1}{2}$ ?

(iv)  $\frac{-1}{2}$  and  $-2\frac{1}{2}$ ?

**6. Find the values of x in each of the following:**

(i)  $\frac{23}{x} = \frac{2}{-8}$

(ii)  $\frac{x}{9} = \frac{19}{3}$

(iii)  $\frac{15}{-x} = \frac{1}{-7}$

**7. Compare the numbers in each of following pairs of numbers.**

(i)  $\frac{-5}{7}$ ,  $\frac{9}{-13}$

(ii)  $\frac{-4}{9}$ ,  $\frac{-3}{7}$

(iii)  $\frac{-3}{-5}$ ,  $\frac{12}{20}$

(iv)  $\left| \frac{-4}{5} \right|$ ,  $\left| \frac{-5}{4} \right|$

(v)  $\left| \frac{5}{7} \right|$ ,  $\left| \frac{-15}{21} \right|$

(vi)  $\left| \frac{-8}{-9} \right|$ ,  $\left| \frac{-3}{9} \right|$

**8. Fill in the following blank squares.**

(i)  $\frac{3}{5} = \frac{138}{\square}$

(ii)  $\frac{7}{9} = \frac{\square}{108}$

(iii)  $\frac{\square}{-15} = \frac{48}{90}$

(iv)  $\frac{121}{\square} = \frac{-11}{12}$