

ST. THOMAS SCHOOL, SAHIBABAD
WORKSHEET -1 [2020-2021]
MATHEMATICS
CLASS VIII

TOPIC – RATIONAL NUMBERS]

Natural numbers: N - 1, 2, 3

Whole numbers: W - 0, 1, 2, 3,

Integers: Z - (i) -1, -2, -3 (Negative integers)

(ii) 0

(iii) 1, 2, 3 (Positive integers)

Rational numbers: Q - It includes natural numbers, whole numbers and integers.

Definition: A number that can be expressed in the form $\frac{p}{q}$, where p & q are integers and $q \neq 0$ is called as a

Rational Number. e.g. 1, 0, -10, -7, $\frac{2}{3}$, $\frac{-3}{7}$, etc...

Properties of rational numbers:

- (i) Rational numbers are closed under the four basic operations namely addition, subtraction, multiplication and division.**
- (ii) Rational numbers are commutative for addition and multiplication.**
- (iii) Rational numbers are associative for addition and multiplication.**
- (iv) Zero is called the additive identity for rational numbers.**
- (v) One is called the multiplicative identity for rational numbers.**
- (vi) For a rational number $\frac{a}{b}$,**

$$\frac{a}{b} + \left(-\frac{a}{b}\right) = \left(-\frac{a}{b}\right) + \left(\frac{a}{b}\right) = 0 \text{ [Additive inverse of a rational number]}$$

- (vii) If $\frac{a}{b} \times \frac{c}{d} = 1$, then $\frac{c}{d}$ is called the multiplicative inverse (or reciprocal) of $\frac{a}{b}$ and vice – versa.**

(viii) **Distributive property:** For all rational numbers a, b, and c

1) $a(b + c) = ab + ac$ 2) $a(b - c) = ab - ac$

(ix) **There exists infinite number of rational numbers between two given rational numbers.**

(x) **In positive rational numbers, numerator & denominator both are either positive or negative.**

e.g. $\frac{3}{8}$, $\frac{-2}{-7}$,

(xi) **In negative rational numbers, numerator and denominator carry opposite signs.**

e.g. $\frac{-5}{8}$, $\frac{2}{-3}$,

Solve the following :

1. Fill in the blanks:

- a) The product of two positive rational number is always _____.
- b) The product of two rational numbers is always a_____.
- c) The reciprocal of -1 is _____.
- d) The reciprocal of 1 is _____.
- e) The multiplicative inverse of $\frac{-5}{8}$ is _____.

2. Answer True or False:

- a) Subtraction is commutative for rational numbers.
- b) 0 is its own additive inverse.
- c) The additive inverse of $\frac{-21}{-30}$ is $\frac{-21}{-30}$
- d) While subtracting three or more rational numbers, they can be grouped in any order.
- e) $\frac{-5}{0}$ is a negative rational number.

3. Multiple Choice Questions

a) The property of rational numbers illustrated by the mathematical expression

b) $\left(\frac{2}{7} + \frac{-3}{8}\right) \times \frac{5}{11} = \left(\frac{2}{7} \times \frac{5}{11}\right) + \left(\frac{-3}{8} \times \frac{5}{11}\right)$ is:

- (i) Associativity of Addition
- (ii) Distributivity of Multiplication over Addition
- (iii) Associativity of Multiplication
- (iv) Commutativity

c) The rational number equivalent to $\frac{-24}{45}$ is :

(i) $\frac{12}{20}$ iii) $\frac{-6}{9}$

(ii) $\frac{-8}{15}$ iv) $\frac{4}{11}$

d) The sum of the additive inverse and the multiplicative inverse of 2 is:

i) $\frac{3}{2}$ iii) $\frac{-3}{2}$

ii) $\frac{1}{2}$ iv) $\frac{-1}{2}$

e) The multiplicative inverse of $-2 \times \frac{-3}{5}$ is

i) $\frac{-6}{5}$ iii) $\frac{-5}{6}$

ii) $\frac{5}{6}$ iv) 1

4. Name the property in the following statement:

b) $\left(\frac{7}{4} + \frac{-3}{8}\right) + \frac{5}{11} = \left(\frac{7}{4} + \frac{-3}{8}\right) + \frac{5}{11}$

d) $\frac{-13}{17} \times 1 = \frac{-13}{17} = 1 \times \frac{-13}{17}$

c) $\frac{-17}{5} \times 9 = 9 \times \frac{-17}{5}$

e) $\frac{2}{13} \times 0 = 0 = 0 \times \frac{2}{13}$

5. Verify the property : $(x \times y) \times z = x \times (y \times z)$ by taking

(i) $x = \frac{-7}{3}$, $y = \frac{12}{5}$, $z = \frac{4}{9}$

(ii) $x = \frac{1}{2}$, $y = \frac{5}{-4}$, $z = \frac{-7}{5}$

NOTE: Students are requested to do the worksheet in a new notebook (it should be covered in purple and labelled neatly) or in A4 sheet.

**ST. THOMAS SCHOOL
ENGLISH WORKSHEET
CLASS-VIII**

April 03, 2020

Time: 15 min.

SECTION A (READING)

1. Read the following passage and answer the questions that follow.

Last November on a visit to Dubai my parents and I went to see the Mall of the Emirates. Apart from it being the biggest Mall outside North America it also houses an indoor skiing resort. Hitherto an outdoor sport of snowbound mountain slopes in the winter season, thanks to human ingenuity it is now an indoor sport. The area under snow in the Mall is equivalent to three football pitches. The ski slope runs inside a giant, slanting metal tube, which is approximately 25 floors high. The ski slope is 300 metres long to provide maximum thrill to skiers. The longest ski slope in the world, it is build inside what is basically a large freezer.

The ideal temperature to make snow should not be higher than 3 degree Celcius. Add to this the chill wind while skiing at 25 to 30 mph and it can be very cold. Therefore a person has to be properly and warmly dressed, and appropriate clothing and equipment provided at the entry for a fee of 35 Dollar. The snow is made by shooting water at high pressure into the atmosphere that is maintained at around freezing point by coolers both below and above the slopes. It is estimated that everyday about 7,500 tons of snow is injected onto the ski slopes.

There are windows through which you can watch the skiers. It resembles a typical ski resort with cable cars and lift chairs to take the skiers to the top of the slope. Until now Dubai has been a destination for warm beach holidays, but now it is also a popular ski resort

1.1 Answer the following questions.

- (a) Mention two unique things about the Mall of the Emirates?
- (b) How long is the ski slope and how is it entertaining?
- (c) How is the snow made in the resort?
- (d) How do the skiers reach the top of the slope?

1.2 Find the synonym of the following words from the passage.

- (a) intelligence
- (b) managed

1.3 Find the antonym of the following words from the passage.

- (a) ramps
- (b) differ

दिनांक - 03/04/2020

सेंट थॉमस स्कूल

अभ्यास पत्र -1 (2020-2021)

विषय - हिंदी कक्षा - आठवीं

प्र0-1- दिए गए शब्दों से भाववाचक संज्ञा बनाकर लिखिए ।

1. बूढ़ा
2. चतुर
3. बुरा
4. सेवक
5. मीठा
6. निर्धन
7. मनुष्य
8. मानव
9. सज्जन
10. कायर

प्र0-2- निम्नलिखित शब्दों के दो-दो पर्यायवाची शब्द लिखिए -

1. संसार
2. पहाड़
3. समुद्र
4. दिन
5. गंगा
6. पानी
7. पुत्र
8. धरती

प्र0-3- निम्नलिखित शब्दों के विलोम शब्द लिखिए -

1. प्रकाश
2. प्रत्यक्ष
3. मानव
4. पराधीन
5. निर्दय
6. चेतन
7. प्राचीन
8. उदय
9. स्वामी
10. खुश