Success Key Worksheet

Std: Class 8 (Eng.& Semi) | **Ch. 1. Rational and Irrational numbers (DPP)** | **Time: 1 Hr.**

Date: | **Subject: Mathematics** | **Max Marks: 20**

Q.1) Choose the correct alternative answer for each of the following questions: **15**

1) _____ is useful in representing irrational numbers on number line.
   (a) Squares and square roots
   (b) Pythagoras theorem
   (c) Sum angle property of a triangle
   (d) Indices

2) A number in the form of $\frac{p}{q}$ is said to be rational number if
   (a) p and q are integers
   (b) p and q are integers, $q \neq 0$
   (c) p and q are integers, $p \neq 0$
   (d) p and q are integers, $q \neq 0$; $p \neq 0$

3) -4 is a _____
   (a) natural number
   (b) rational number
   (c) whole number
   (d) irrational number

4) Which of the following lies between 0 and -1?
   (a) 2 (b) -3 (c) $\frac{-2}{3}$ (d) $\frac{-4}{3}$

5) The rational number 3.77777….. is
   (a) Terminating decimal number
   (b) Non terminating decimal number
   (c) Non terminating recurring decimal number
   (d) Non terminating non-recurring decimal number

6) Which of the following is in standard form?
   (a) $-\frac{14}{16}$ (b) $\frac{-9}{28}$ (c) $\frac{-26}{-78}$ (d) $\frac{48}{-97}$

7) _____ is the smallest rational number among $\frac{-4}{9}, \frac{5}{-12}, \frac{7}{-18}, \frac{-2}{3}$
   (a) $\frac{-2}{3}$ (b) $\frac{-4}{9}$ (c) $\frac{5}{-12}$ (d) $\frac{7}{-18}$

8) _____ is the only rational number which does not have a reciprocal?
   (a) 1 (b) -1 (c) 0 (d) $\frac{-3}{5}$

9) If 5 > 1, then
   (a) -5 > 1 (b) -5 < -1 (c) 5 < -1 (d) -5 > -

10) Which two are equivalent rational numbers?

(a) $\frac{-5}{4}, \frac{-25}{20}$ (b) $\frac{1}{2}, \frac{5}{2}$ (c) $\frac{3}{-7}, \frac{21}{49}$ (d) $\frac{-12}{5}, \frac{-12}{7}$

11) Assume that p/q is a rational number, to obtain a rational number with same value we must

(a) Multiply both p and q by same integer

(b) Divide both p and q by same integer

(c) Multiply both p and q by 1

(d) Both (a) and (b)

12) A rational number -7/9 lies on the

(a) left of -7 (b) right of 0 (c) left of -1 (d) right of 1

13) For what value of 'a' do $\frac{-1}{-4}$ and $\frac{a}{8}$ are equivalent?

(a) a = 1 (b) a = 2 © a = 4 (d) a = -2

14) Rational number $-\frac{9}{7}$ is always _____.

(a) Greater than 0 (b) less than 0 (c) equal to $-\frac{7}{9}$ (d) greater than 1

15) Decimal representation of 98/2000 is

(a) 49 (b) 0.049 (c) 0.098 (d) 2.098

Q.2) Solve the following sub questions: **5**

1) Compare the following numbers:

$-\frac{17}{20}, \frac{-13}{20}$

2) Compare the following numbers:

$\frac{40}{29}, \frac{141}{29}$

3) Compare the following numbers:

$\frac{-5}{4}, \frac{1}{4}$

4) Compare the following numbers: -7, -2

5) Compare the following numbers:

$0, \frac{-9}{5}$

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Q.1) Choose the correct alternative answer for each of the following questions: **15**

1)Ans. (b) Pythagoras theorem

2)Ans. (b)

3)Ans. (b) rational number

4)Ans. (c)

5)Ans. (c) Non terminating recurring decimal number

6)Ans. (b)

7)Ans. (a)

8)Ans. (c)

9)Ans. (b) $-5 < -1$

10)Ans. (a)

11)Ans. (d) Both (a) and (b)

12)Ans. (c) left of -1

13)Ans. (b) $a = 2$

14)Ans. (b)

15)Ans. (b) 0.049

Q.2) Solve the following sub questions: **5**

1)Ans. $-17 < -13$

$\therefore$ $-17/20 < -13/20$

2)Ans. The denominator of the given rational number is the same.

$\therefore$ Let us compare their numerators

$40 < 141 \therefore 40/29 < 141/29$

$\therefore$ $40/29 < 141/29$

3)Ans. We know that, a negative number is always less than a positive number.

$\therefore$ $-5/4 < 1/4$

4)Ans. $7 > 2$

$\therefore$ $-7 < -2$

5)Ans. On a number line, negative numbers are to the left of zero.

$\therefore$ $0 > -9/5$