NAME: ANANDITA PANDA

SUBJECT: MATHEMATICS

ROOL NO: _____ SCHOOL NO: 3646

STD: VII SEC: D YEAR: _____

# Chapter 02 Rational numbers Worksheet

1) A rational numbers is defined as a number that can be expressed in the form $p/q$, where p and q are integers and
a) $q=0$ c) $q \neq 1$
b) $q=1$ d) $q \neq 0$ ✓

2) In the standard form of a rational number, the common factor of numerator and denominator is always
a) 0 c) -2
b) 1 ✓ d) 2

3) the standard form of $\frac{-48}{60}$ is
a) $\frac{48}{60}$ b) $\frac{-60}{48}$ c) $\frac{+4}{5}$ ✓ d) $\frac{-4}{-5}$

4) Which of the following is equivalent to $\frac{4}{5}$?
a) $\frac{5}{4}$ b) $\frac{16}{12}$ c) $\frac{16}{20}$ ✓ d) $\frac{15}{25}$

5) How many rational numbers are there between two rational number?
a) 1 c) unlimited ✓
b) 0 d) 100

6) In the standard form of a rational number, the denominator is always a
a) 0 c) positive integer ✓
b) negative integer d) 1.

## Fill in the blanks

7) $\frac{-3}{8}$ is a rational number integer.

8) On a ~~the~~ number line, $\frac{3}{4}$ is the right of zero (0)

9) $\frac{1}{2}$ is smaller than $\frac{1}{5}$.

10) $\frac{7}{-8}$ $\boxed{<}$ $\frac{8}{9}$

11) $\frac{3}{7}$ $\boxed{>}$ $\frac{-5}{6}$

12) $\frac{5}{6}$ $\boxed{>}$ $\frac{4}{8}$

13) $\frac{-9}{7} < \frac{4}{-7}$

14) $\frac{8}{8}$ $\boxed{=}$ $\frac{2}{2}$

15) The reciprocal of 0 does not exist.

16) By what number should we multiply $\frac{-3}{8}$, so that the product is $\frac{-9}{16}$?

Product = X

$$\frac{-3}{8} \times x = \frac{-9}{16}$$

$$x = \frac{9}{16} \times \frac{8}{3}$$

$$= \frac{3 \times 1}{2 \times 1}$$

$$= 1\frac{1}{2}$$

17) The cost of $4\frac{1}{2}$ metres of cloth is Rs $85\frac{1}{2}$. Find the cost of one meter cloth.

Rs. 85.50 ÷ 4.5m
= 855 ÷ 45
= Rs. 19.

Cost of 1 meter cloth is Rs. 19.

18) The stairway consists of 14 stairs each $32\frac{5}{7}$ cm high. What is the vertical height of stairways?

Height of one stairway $= 7 \times 32 + \frac{5}{7}$

Height of one stairway $= \frac{229}{7}$

Height of all stairs $= \frac{229}{7} \times 14$

$= 229 \times 2$

The vertical height of all the stairs = 458

19) Arrange the rational numbers $\frac{-7}{10}, \frac{5}{-8}, \frac{2}{-3}$ in ascending order.

$\frac{-7}{10}, \frac{5}{-8}, \frac{2}{-3} = \frac{-7}{10}, \frac{-5}{8}, \frac{-2}{3}$

LCM of 10, 8, 3 = 120.

$\frac{-7}{10} \times \frac{12}{12} = \frac{-84}{120} = \frac{-75}{120} < \frac{-80}{120} < \frac{-84}{120}$

$\frac{-5 \times 15}{8 \times 15} = \frac{-75}{120} = \frac{-5}{8} < \frac{-2}{3} < \frac{-7}{10}$

$\frac{-2 \times 40}{3 \times 40} = \frac{-80}{120}$

20) The sum of two rational numbers is $-5$. If one of them is $\frac{-52}{25}$, find the other.

Sum $= -5$

One of them $= \frac{-52}{25}$

$= \frac{-5 \times 25}{1 \times 25} + \frac{52 \times 1}{25 \times 1}$

$= \frac{-125 + 52}{25} = \frac{-77}{25}$

$\therefore$ Second number is $\frac{-77}{25}$