Practice – No.1 –Key Answers

Perform operations with real numbers, Simplify exponent expressions and radical expressions: -

1. Identify the real numbers below.

   I.   1= N and I , $\frac{1}{5} = R$, $\sqrt{2} = IR$, -210 = I

   II. $1.67 = R$, $\pi = IR$, $0 = N$ and I, $\sqrt{4} = N$ and I

   III. $-0.33\bar{3} = R$, 1000= N and I , $-\frac{7}{8} = R$, $-\left(\sqrt{16}\right) = I$

2. Which of the following is a rational number?

   I. $\frac{5}{6}$, -0.253

   II. -0.12413 ,0.51

   III. $3.33\bar{3}$

3. Which of the following is an irrational number?

   I.   *None*

   II. π

   III. None

4. Identify the natural number(s) below?

   I. 0

   II. $\sqrt{9}$, 26

   III. $640, 0$

5.List all numbers from the given set that are:

   I.   Natural numbers (N)

   II.   Integers (I)

   III. Rational numbers (R)

   IV.   Irrational numbers (IR)

   -9 = I , $-\frac{4}{5} = R$, 0 = N and I , 0.25 = R , $\sqrt{3} = IR$,9.2 = R ,$\sqrt{100} = N$ and I

6.Evaluate each algebraic expression for the given value or values of the variable(s):

I. 57

II. 10

III. 88

IV. 10

V. 44

VI. 46

VII. 10

VIII. -8

IX. 10

X. 60

7.Use the order of operations to simplify each expression:

I. 45

II. 1 / 121

III. 14

IV. 2.6

V. 0.5

8.Determine whether each statement is true or false. And if it false gives the true one.

I.	Every rational number is an integer.	(F)
II.	Some whole numbers are not integer.	(F)
III.	Some rational numbers are not positive.	(T)
IV.	Irrational numbers cannot be negative.	(F)
V.	The term x has no coefficient.	(F)
VI.	$5 + (x - 4) = 8(x - 4) = 8x - 32$	(F)
VII.	$-x - x = -x + (-x) = 0$	(F)
VIII.	$x - 0.02(x + 200) = 0.98x - 4$	(T)

9. Rewrite each expression without absolute value bars:

   I.   300

   II.   8.86

   III. -3.58

   IV. -1

   V. - 4

10 Evaluate each algebraic expression for $x = 2$ and $y = -5$

   I.   3   ,   7

   II.   7   , -3

   III. -1 ,   0

11. Express the distance between the given numbers using absolute value. Then find the distance by evaluating the absolute value expression.

   I.   15

   II.   7

   III. 15

12. Simplify each algebraic expression:

   I. $15x + 16$

   II. $29y - 29$

   III. $8y - 12$

   IV. 12y -24

   V. $24x^2$ +11

   VI. 14x

   VII. -2x +3y +6

   VIII. x

   IX. 45

   X. 14

   XI. $\frac{2(-2)-4(-3)}{5-8}$ = -2.6

   XII. $\frac{12\div3\cdot5\left|2^2+3^2\right|}{7+3-6^2}$ = -10