Worksheet
CLASS-IX
Ch-Number System
SUBJECT: MATHEMATICS

1. Express the following numbers in the form of $\frac{p}{q}$:

   (a) -25.6875

   (b) 0.621621621..

   (c) 15.712121212..

2. Write one rational & one fractional number between 0.515115111.... and 0.535335333....

3. Write one example each of two irrational numbers whose:

   (a) Sum is a rational number

   (b) Product is an irrational number

   (c) Difference is an irrational number

   (d) Quotient is a rational number

4. Simplify : $[\{(625)^{-1/2}\}^{-1/4}]^2$

5. (a) Find the value of x if $2^{x-7} \times 5^{x-4} = 1250$

   (b) Find the value of x and y if:

   $3^{x-1} = 9$ & $4^{y+2} = 64$

6. Find the value of a & b if $\frac{5 + 2\sqrt{3}}{7 + 4\sqrt{3}} = a + b\sqrt{3}$

7. If $x = 3 + \sqrt{8}$, then find the value of $x^2 + \frac{1}{x^2}$.

1. A rational number equivalent to 7 / 19.
a. 17 / 119   b. 14 / 57   c. 21 / 38   d. 21 / 57

2. Find the rationalization factor of $2+\sqrt{3}$
a. $2 - \sqrt{3}$ b. $\sqrt{3}$ c. $2 + \sqrt{3}$ d. $3 + \sqrt{3}$

3. Every rational number is
a. a natural number   b. an integer   c. a real number.   d. a whole number

4. Point (-2, -3) lies in the
a. 1st quadrant.   b. 2nd quadrant   c. 3rd quadrant   d. 4th quadrant

5. The distance of the point (5,2) from x- axis is
a. 5   b. 2.   c. 7   d. 3

6. In which quadrant abscissa is negative and ordinate is positive?
a. 1st quadrant   b. 2nd quadrant   c. 3rd quadrant   d. 4th quadrant

7. If the coordinate of the point P are (3, -5), then the perpendicular distance of P from the y-axis is

a. 4.   b. 5.   c. 3   d. 2

8. If (3, -2) is a solution of the equation $3x - py - 7 = 0$. Then the value of p is
a. -1   b. 1   c. -7   d. 2

9. A linear equation $2x - 5y = 7$ has
a. A unique Solution   b. Two Solutions

c. Infinitely Many Solutions   d. No solution

10. Which of the following equations has graph parallel to y-axis?
a. $y = -2$ b. $x = 1$ c. $x - y = 2$ d. $x + y = 2$

11. Age of mother is 7 years more than 3 times the present age of his son. The above statement can be expressed in linear equation as
a. $x - 3y - 7 = 0$ b. $x + 3y + 7 = 0$ c. $x + 3y - 7 = 0$ d. $x - 3y + 7 = 0$

12. The value of semi-perimeter of an equilateral triangle having area $4\sqrt{3}$ cm² is_____
a. 8 cm   b. 36 cm   c. 6 cm   d. 12 cm

13. An isosceles right triangle has area 8 cm square. Find the length of its hypotenuse.
a. $\sqrt{32}$ cm   b. $\sqrt{48}$ cm   c. $\sqrt{24}$ cm   d. 4 cm

14. In a triangle the sides are 9cm, 28cm and 35cm. The area of the triangle is
a. $36\sqrt{7}$ cm   b. $36\sqrt{6}$ cm   c. $35\sqrt{5}$ cm   d. $37\sqrt{7}$ cm

15. Which of the following is correct statement?
a. Two triangles having same shape are congruent.

b. If two sides of triangle are equal to the corresponding sides of another triangle, then the two triangles are congruent.
c. If the hypotenuse and one side of a right triangle are equal to the hypotenuse and one side of another right triangle, then the triangles are not congruent.
d. None of these