MCQ WORKSHEET-I
CLASS X : CHAPTER - 1
REAL NUMBERS

1. A rational number between $\frac{3}{5}$ and $\frac{4}{5}$ is:

(a) $\frac{7}{5}$ (b) $\frac{7}{10}$ (c) $\frac{3}{10}$ (d) $\frac{4}{10}$

2. A rational number between $\frac{1}{2}$ and $\frac{3}{4}$ is:

(a) $\frac{2}{5}$ (b) $\frac{5}{8}$ (c) $\frac{4}{3}$ (d) $\frac{1}{4}$

3. Which one of the following is not a rational number:

(a) $\sqrt{2}$ (b) 0 (c) $\sqrt{4}$ (d) $\sqrt{-16}$

4. Which one of the following is an irrational number:

(a) $\sqrt{4}$ (b) $3\sqrt{8}$ (c) $\sqrt{100}$ (d) $-\sqrt{0.64}$

5. $3\frac{3}{8}$ in decimal form is:

(a) 3.35 (b) 3.375 (c) 33.75 (d) 337.5

6. $\frac{5}{6}$ in the decimal form is:

(a) $0.8\overline{3}$ (b) $0.8\overline{33}$ (c) $0.6\overline{3}$ (d) $0.6\overline{33}$

7. Decimal representation of rational number $\frac{8}{27}$ is:

(a) $0.\overline{296}$ (b) $0.29\overline{6}$ (c) $0.2\overline{96}$ (d) 0.296

8. 0.6666…….. in $\frac{p}{q}$ form is:

(a) $\frac{6}{99}$ (b) $\frac{2}{3}$ (c) $\frac{3}{5}$ (d) $\frac{1}{66}$

9. The value of $\left(\sqrt{5}+\sqrt{2}\right)\left(\sqrt{5}-\sqrt{2}\right)$ is:

(a) 10 (b) 7 (c) 3 (d) $\sqrt{3}$

10. $0.\overline{36}$ in $\frac{p}{q}$ form is:

(a) $\frac{6}{99}$ (b) $\frac{2}{3}$ (c) $\frac{3}{5}$ (d) none of these

MCQ WORKSHEET-II
CLASS X : CHAPTER - 1
REAL NUMBERS

1. $\sqrt{5}-3-2$ is

(a) a rational number (b) a natural number (c) equal to zero (d) an irrational number

2. Let $x = \frac{7}{20\times 25}$ be a rational number. Then x has decimal expansion, which terminates:

(a) after four places of decimal (b) after three places of decimal
(c) after two places of decimal (d) after five places of decimal

3. The decimal expansion of $\frac{63}{72\times 175}$ is

(a) terminating (b) non-terminating
(c) non termination and repeating (d) an irrational number

4. If HCF and LCM of two numbers are 4 and 9696, then the product of the two numbers is:

(a) 9696 (b) 24242 (c) 38784 (d) 4848

5. $\left(2+\sqrt{3}+\sqrt{5}\right)$ is :

(a) a rational number (b) a natural number (c) a integer number (d) an irrational number

6. If $\left(\frac{9}{7}\right)^3 \times \left(\frac{49}{81}\right)^{2x-6} = \left(\frac{7}{9}\right)^9$, the value of x is:

(a) 12 (b) 9 (c) 8 (d) 6

7. The number .211 2111 21111….. is a

(a) terminating decimal (b) non-terminating decimal
(c) non termination and non-repeating decimal (d) none of these

8. If $(m)^n = 32$ where m and n are positive integers, then the value of $(n)^{mn}$ is:

(a) 32 (b) 25 (c) 5^{10} (d) 5^{25}

9. The number $0.\overline{57}$ in the $\frac{p}{q}$ form $q \neq 0$ is

(a) $\frac{19}{35}$ (b) $\frac{57}{99}$ (c) $\frac{57}{95}$ (d) $\frac{19}{30}$

10. The number $0.5\overline{7}$ in the $\frac{p}{q}$ form $q \neq 0$ is

(a) $\frac{26}{45}$ (b) $\frac{13}{27}$ (c) $\frac{57}{99}$ (d) $\frac{13}{29}$

11. Any one of the numbers a, a + 2 and a + 4 is a multiple of:

(a) 2 (b) 3 (c) 5 (d) 7

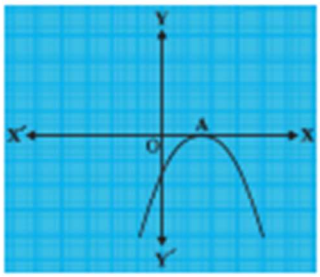
12. If p is a prime number and p divides k^2, then p divides:

(a) $2k^2$ (b) k (c) 3k (d) none of these

MCQ WORKSHEET-I
CLASS X : CHAPTER - 2
POLYNOMIALS

1. The value of k for which (–4) is a zero of the polynomial $x^2 - x - (2k + 2)$ is
   (a) 3 (b) 9 (c) 6 (d) –1

2. If the zeroes of the quadratic polynomial ax2 + bx + c, c ≠ 0 are equal, then
   (a) c and a have opposite sign (b) c and b have opposite sign
   (c) c and a have the same sign (d) c and b have the same sign



3. The number of zeroes of the polynomial from the graph is
   (a) 0 (b) 1 (c) 2 (d) 3

4. If one of the zero of the quadratic polynomial $x^2 + 3x + k$ is 2, then the value of k is
   (a) 10 (b) –10 (c) 5 (d) –5

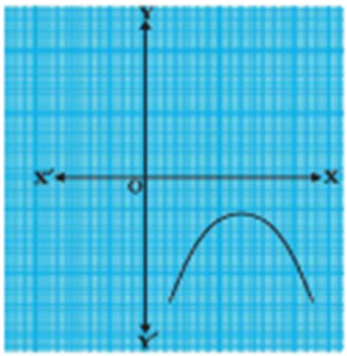
5. A quadratic polynomial whose zeroes are –3 and 4 is
   (a) $x^2 - x + 12$ (b) $x^2 + x + 12$ (c) $2x^2 + 2x - 24$. (d) none of the above.

6. The relationship between the zeroes and coefficients of the quadratic polynomial $ax^2 + bx + c$ is (a) $\alpha + \beta = \frac{c}{a}$ (b) $\alpha + \beta = \frac{-b}{a}$ (c) $\alpha + \beta = \frac{-c}{a}$ (d) $\alpha + \beta = \frac{b}{a}$

7. The zeroes of the polynomial $x^2 + 7x + 10$ are
   (a) 2 and 5 (b) –2 and 5 (c) –2 and –5 (d) 2 and –5

8. The relationship between the zeroes and coefficients of the quadratic polynomial $ax^2 + bx + c$ is (a) $\alpha.\beta = \frac{c}{a}$ (b) $\alpha.\beta = \frac{-b}{a}$ (c) $\alpha.\beta = \frac{-c}{a}$ (d) $\alpha.\beta = \frac{b}{a}$

9. The zeroes of the polynomial $x^2 - 3$ are
   (a) 2 and 5 (b) –2 and 5 (c) –2 and –5 (d) none of the above



10. The number of zeroes of the polynomial from the graph is
    (a) 0 (b) 1 (c) 2 (d) 3

11. A quadratic polynomial whose sum and product of zeroes are –3 and 2 is
    (a) $x^2 - 3x + 2$ (b) $x^2 + 3x + 2$ (c) $x^2 + 2x - 3$. (d) $x^2 + 2x + 3$.

12. The zeroes of the quadratic polynomial $x^2 + kx + k$, $k \neq 0$,
    (a) cannot both be positive (b) cannot both be negative
    (c) are always unequal (d) are always equal

MCQ WORKSHEET-II
CLASS X : CHAPTER - 2
POLYNOMIALS

1. If α, β are the zeroes of the polynomials $f(x) = x^2 + x + 1$, then $\frac{1}{\alpha} + \frac{1}{\beta}$

   (a) 0 (b) 1 (c) –1 (d) none of these

2. If one of the zero of the polynomial $f(x) = (k^2 + 4)x^2 + 13x + 4k$ is reciprocal of the other then k =

   (a) 2 (b) 1 (c) –1 (d) – 2

3. If α, β are the zeroes of the polynomials $f(x) = 4x^2 + 3x + 7$, then $\frac{1}{\alpha} + \frac{1}{\beta}$

   (a) $\frac{7}{3}$ (b) $\frac{-7}{3}$ (c) $\frac{3}{7}$ (d) $\frac{-3}{7}$

4. If the sum of the zeroes of the polynomial $f(x) = 2x^3 – 3kx^2 + 4x – 5$ is 6, then value of k is

   (a) 2 (b) 4 (c) –2 (d) – 4

5. The zeroes of a polynomial $p(x)$ are precisely the x-coordinates of the points, where the graph of $y = p(x)$ intersects the

   (a) x – axis (b) y – axis (c) origin (d) none of the above

6. If α, β are the zeroes of the polynomials $f(x) = x^2 – p(x + 1) – c$, then $(\alpha + 1)(\beta + 1)$ =

   (a) c – 1 (b) 1 – c (c) c (d) 1 + c

7. A quadratic polynomial can have at most …….. zeroes

   (a) 0 (b) 1 (c) 2 (d) 3

8. A cubic polynomial can have at most …….. zeroes.

   (a) 0 (b) 1 (c) 2 (d) 3

9. Which are the zeroes of $p(x) = x^2 – 1$:

   (a) 1, –1 (b) – 1, 2 (c) –2, 2 (d) –3, 3

10. Which are the zeroes of $p(x) = (x – 1)(x – 2)$:

    (a) 1, –2 (b) – 1, 2 (c) 1, 2 (d) –1, –2

11. Which of the following is a polynomial?

    $(a) x^2 - 5x + 3$

    $(b) \sqrt{x} + \frac{1}{\sqrt{x}}$

    $(c) x^{3/2} - x + x^{1/2}$

    $(d) x^{1/2} + x + 10$

12. Which of the following is not a polynomial?

    $(a) \sqrt{3}x^2 - 2\sqrt{3}x + 3$

    $(b) \frac{3}{2}x^3 - 5x^2 - \frac{1}{\sqrt{2}}x - 1$

    $(c) x + \frac{1}{x}$

    $(d) 5x^2 - 3x + \sqrt{2}$

MCQ WORKSHEET-I
CLASS X : CHAPTER - 3
PAIR OF LINEAR EQUATIONS IN TWO VARIABLES

1. The pair of equations $y = 0$ and $y = -7$ has
(a) one solution (b) two solution (c) infinitely many solutions (d) no solution

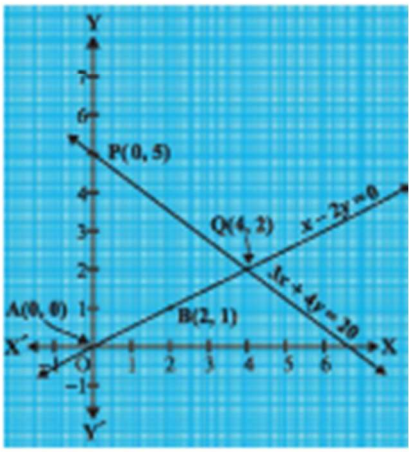
2. The pair of equations $x = a$ and $y = b$ graphically represents the lines which are
(a) parallel (b) intersecting at (a, b)
(c) coincident (d) intersecting at (b, a)

3. The value of c for which the pair of equations $cx - y = 2$ and $6x - 2y = 3$ will have infinitely many solutions is
(a) 3 (b) – 3 (c) – 12 (d) no value

4. When lines l_1 and l_2 are coincident, then the graphical solution system of linear equation have
(a) infinite number of solutions (b) unique solution
(c) no solution (d) one solution

5. When lines l_1 and l_2 are parallel, then the graphical solution system of linear equation have
(a) infinite number of solutions (b) unique solution
(c) no solution (d) one solution

6. The coordinates of the vertices of triangle formed between the lines and y-axis from the graph is
(a) (0, 5), (0, 0) and (6.5,0) (b) (4,2), (0, 0) and (6.5,0)
(c) (4,2), (0, 0) and (0,5) (d) none of these



7. Five years ago Nuri was thrice old as Sonu. Ten years later, Nuri will be twice as old as Sonu. The present age, in years, of Nuri and Sonu are respectively
(a) 50 and 20 (b) 60 and 30 (c) 70 and 40 (d) 40 and 10

8. The pair of equations $5x - 15y = 8$ and $3x - 9y = 24/5$ has
(a) infinite number of solutions (b) unique solution
(c) no solution (d) one solution

9. The pair of equations $x + 2y + 5 = 0$ and $-3x - 6y + 1 = 0$ have
(a) infinite number of solutions (b) unique solution
(c) no solution (d) one solution

10. The sum of the digits of a two digit number is 9. If 27 is added to it, the digits of the numbers get reversed. The number is
(a) 36 (b) 72 (c) 63 (d) 25

MCQ WORKSHEET-II
CLASS X : CHAPTER - 3
PAIR OF LINEAR EQUATIONS IN TWO VARIABLES

1. If a pair of equation is consistent, then the lines will be
   (a) parallel (b) always coincident
   (c) always intersecting (d) intersecting or coincident

2. The solution of the equations $x + y = 14$ and $x – y = 4$ is
   (a) $x = 9$ and $y = 5$ (b) $x = 5$ and $y = 9$ (c) $x = 7$ and $y = 7$ (d) $x = 10$ and $y = 4$

3. The sum of the numerator and denominator of a fraction is 12. If the denominator is increased by b3, the fraction becomes ½ , then the fraction
   (a) $\frac{4}{7}$ (b) $\frac{5}{7}$ (c) $\frac{6}{7}$ (d) $\frac{3}{7}$

4. The value of k for which the system of equations $x – 2y = 3$ and $3x + ky = 1$ has a unique solution is
   (a) $k = – 6$ (b) $k \neq – 6$ (c) $k = 0$ (d) no value

5. If a pair of equation is inconsistent, then the lines will be
   (a) parallel (b) always coincident
   (c) always intersecting (d) intersecting or coincident

6. The value of k for which the system of equations $2x + 3y = 5$ and $4x + ky = 10$ has infinite many solution is
   (a) $k = – 3$ (b) $k \neq – 3$ (c) $k = 0$ (d) none of these

7. The value of k for which the system of equations $kx – y = 2$ and $6x – 2y = 3$ has a unique solution is
   (a) $k = – 3$ (b) $k \neq – 3$ (c) $k = 0$ (d) $k \neq 0$

8. Sum of two numbers is 35 and their difference is 13, then the numbers are
   (a) 24 and 12 (b) 24 and 11 (c) 12 and 11 (d) none of these

9. The solution of the equations $0.4x + 0.3y = 1.7$ and $0.7x – 0.2y = 0.8$ is
   (a) $x = 1$ and $y = 2$ (b) $x = 2$ and $y = 3$ (c) $x = 3$ and $y = 4$ (d) $x = 5$ and $y = 4$

10. The solution of the equations $x + 2y = 1.5$ and $2x + y = 1.5$ is
    (a) $x = 1$ and $y = 1$ (b) $x = 1.5$ and $y = 1.5$(c) $x = 0.5$ and $y = 0.5$(d) none of these

11. The value of k for which the system of equations $x + 2y = 3$ and $5x + ky + 7 = 0$ has no solution is
    (a) 10 (b) 6 (c) 3 (d) 1

12. The value of k for which the system of equations $3x + 5y = 0$ and $kx + 10y = 0$ has a non-zero solution is
    (a) 0 (b) 2 (c) 6 (d) 8