MCQS on Chapter 3: Pair of Linear Equations in Two Variables for Class 10

Q1. The pair of equations $x + 2y – 5 = 0$ and $–4x – 8y + 20 = 0$ has:
(A) A unique solution
(B) Exactly two solutions
(C) Infinitely many solutions
(D) No solution
Q2. A pair of linear equations which has NO solution is called:
(A) Consistent
(B) Dependent
(C) Inconsistent
(D) Independent
Q3. If a pair of linear equations is consistent, the lines representing these equations are:
(A) Always parallel
(B) Always coincident
(C) Always intersecting
(D) Intersecting or coincident
Q4. 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
Q5. For what value of k do the equations $2x + ky = 1$ and $3x – 5y = 7$ have a unique solution?
(A) $k = –10/3$
(B) $k \neq –10/3$
(C) $k = 10/3$
(D) $k \neq 10/3$
Q6. The pair of equations $x = a$ and $y = b$ graphically represents lines which are:
(A) Parallel

(B) Intersecting at (b, a)
(C) Coincident
(D) Intersecting at (a, b)

Q7. How many solutions does a pair of coincident lines have?
(A) 0
(B) 1
(C) 2
(D) Infinitely many

Q8. Five years hence, the age of Jacob will be three times that of his son. Five years ago, Jacob's age was seven times that of his son. Their present ages are:
(A) Jacob: 40 years, Son: 10 years
(B) Jacob: 45 years, Son: 15 years
(C) Jacob: 30 years, Son: 10 years
(D) Jacob: 35 years, Son: 10 years

Q9. The angles of a cyclic quadrilateral ABCD are: $A = (6x + 10)°$, $B = (5x)°$, $C = (x + y)°$, and $D = (3y – 10)°$. The values of x and y are:
(A) $x = 20°, y = 10°$
(B) $x = 20°, y = 30°$
(C) $x = 44°, y = 15°$
(D) $x = 15°, y = 15°$

Q10. Using cross-multiplication, the solution of $ax + by = a – b$ and $bx – ay = a + b$ is:
(A) $x = 1, y = –1$
(B) $x = –1, y = 1$
(C) $x = 1, y = 1$
(D) $x = –1, y = –1$

Q11. The solution of $4/x + 3y = 14$ and $3/x – 4y = 23$ is:
(A) $x = 1/5, y = –2$
(B) $x = 1/3, y = 1/2$
(C) $x = 3, y = 1/2$
(D) $x = 2, y = 1/3$

Q12. In the system $1/(3x + y) + 1/(3x – y) = 3/4$ and $1/(2(3x + y)) – 1/(2(3x – y)) = –1/8$, the values of x and y are:
(A) $x = 1, y = 1$
(B) $x = 1/3, y = 1$

(C) x = 1, y = –1
(D) x = 1/3, y = –1

Q13. If x = a and y = b is the solution of the equations x – y = 2 and x + y = 4, what are the values of a and b?
(A) a = 3, b = 5
(B) a = 1, b = 3
(C) a = 3, b = 1
(D) a = 5, b = 3

Q14. The sum of two numbers is 18 and their difference is 4. The numbers are:
(A) 11 and 7
(B) 12 and 6
(C) 10 and 8
(D) 13 and 5

Q15. The sum of the digits of a two-digit number is 9. If 27 is added to the number, the digits are reversed. The number is:
(A) 36
(B) 45
(C) 27
(D) 18

Answer Key

1 - c, 2 - c, 3 - d, 4 - d, 5 - b, 6 -d, 7 - d, 8 - a, 9 - b, 10 - a, 11- a, 12 - b, 13 - a, 14 - a, 15 -a