## CBSE TEST PAPER-01

## Class X - Mathematics (Pair of Linear Equation)

1.  A pair of linear equation in two variables which has a common point i.e., which has [1] only one solution is called a

    (a) Consistent pair             (b) Inconsistent pair

    (c) Dependent pair             (d) None of these

2.  If a pair of linear equation $a_1x + b_1y + c_1 = 0$ and $a_2x + b_2y + c_2 = 0$ represents [1] coincident lines, then

    (a) $\dfrac{a_1}{a_2} \neq \dfrac{b_1}{b_2}$             (b) $\dfrac{a_1}{a_2} = \dfrac{b_1}{b_2} \neq \dfrac{c_1}{c_2}$

    (c) $\dfrac{a_1}{a_2} = \dfrac{b_1}{b_2} = \dfrac{c_1}{c_2}$             (d) None of these

3.  The value of 'k' for which the system of equation 2x + 3y = 5 and 4x + ky = 10 has [1] infinite number of solutions is

    (a) k = 1             (b) k = 3

    (c) k = 6             (d) k = 0

4.  If the system of equation 2x + 3y = 7 and 29x + (a + b) y = 28 has infinitely many [1] solutions, then

    (a) a = 2b             (b) b = 2a

    (c) a + 2b = 0             (d) 2a + b = 0

5.  The cost of two kg of apples and 1 kg of grapes on a day was found to be Rs. 160. [2] After a month the cost of 4 kg apples and 2 kg grapes is Rs. 300. Represent the
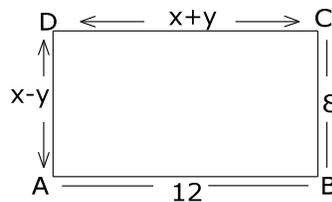
situation algebraically and graphically.

6. Find the value of 'k' for which the system of equation $kx + 3y = k - 3$ and $12x + ky =$  [2]
   k will have no solution.

   [2]

7. ABCD is a rectangle, find the values of x and y.  [2]



8. Solve the following system of equation graphically.  [3]

   $x + 2y = 1$, $x - 2y = -7$, also read the points from the graph where the lines meet the
   x-axis and y-axis.

9. Solve $23x - 29y = 98$ and $29x - 23y = 110$.  [3]

10. A man has only 20 paise coins and 25 paisea coins in his purse. If he has 50 coins in  [3]
    all totaling Rs 11.25. How many coins of each kind does he have?

11. A says to B "my present age is five times your that age when I was an old as you are  [3]
    now. It the sum of their present ages is 48 years, find their present ages.

12. A boat goes 30 km upstream and 44 km downstream in 10 hours. In 13 hours it  [5]
    can go 40 km upstream and 55 km down stream. Determine the speed of the
    stream and that of the boat in still water.