INDIAN SCHOOL NIZWA - WORKSHEET

MATHEMATICS

3. Pair of Linear Equations in Two Variables

Name: _____ Date:_____ Class: X Sec: ___

1.	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
2.	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≠ -6 c) k=0 d) no value
3.	Find 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.	The pair of equations $y = 0\ and\ y = -7$ has _____solution. a) One solution b) two solutions c) no solution d) infinitely many solutions
5.	The pair of equations x=a and y=b graphically represent the lines which are: a)parallal b) intersecting at (a,b) c) coincident d) intersecting (b,a)
6.	Solve for x and y : 254x + 309y = -55 and 309x + 254y = 55
7.	Solve for x and y : 631x + 279y = 910 and 279x + 631y = 910.
8.	Solve graphically: x – 2y + 8 = 0 and 3x + 2y = 24. Also find the area of triangle formed between the lines and x- axis.
9.	The difference between two numbers is 44. The larger number is 4 times the smaller number. Find the numbers.
10.	The larger of two complementary angles is 16 more than the smaller one. Find the angles.
11.	Saroja had only 10 rupee notes and 5 rupee notes. Total number of notes is 50 and total amount is ₹425. Find the number each notes.
12.	In a library there is a fixed charge for first 5 days and a fine for every day after that. Mini kept the book with her for 14 days paid ₹110. Renu kept book for 25 days and paid ₹220. Find the fixed charge and daily fine.
13.	Six years hence, a man will be three times as old as his son. Three years ago , he was nine times as old as his son. Find their present ages.

14.	The sum of digits of a two digit number is 15.The number is decreased by 27, if the digits are reversed. Find the number.
15.	The area of a rectangle gets reduced by 9 square units, if the length is reduced by 5 units and breadth is increased by 3 units. If we increase the length by 3 units and breadth by 2 units, the area increases by 67 square units. Find the dimensions of the rectangle.
16.	Taxi in a city comprises of a fixed charge and rest of the amount depends on the distance you travel. A person who travelled 25 km paid ₹550 and another person who travelled 12 km paid ₹290. Find the fixed charge and the charge per km.
17.	₹ 4900 were divided among 150 children. If each girl gets ₹50 and a boy gets ₹25, then find the number of girls and boys.
18.	Draw the graphs of the equations $x - y + 1 = 0 \; and \; 3x + 2y - 12 = 0$. Determine the coordinates of the vertices of the triangle formed by these lines and the x-axis and shade the triangular region and find the area enclosed by it.
19.	A man wished to give ₹12 to each person and found that he will fall short of ₹6 when he wanted to give to all the persons present. He, therefore, distributed ₹ 9 to each person and found that ₹9 was left over. How much money did he have and how many persons were there?
20.	Find c if the system of equations $cx + 3y + (3 - c) = 0 \quad and \; 12x + cy - c = 0$ has infinitely many solutions.
21.	The residents of a group housing society at Dwarka decided to build a rectangular portion of flowers around their society garden to beautify it. One of the members of the society made some calculations and informed that if the length of the rectangular garden is increased by 2m and the breadth reduced by 2m, the area gets reduced by 12 sq.m. If however, the length is decreased by 1m and breadth increased by 3m, the area of the rectangle is increased by 21. sq m. a) Find the dimensions of the rectangular garden. b) If the lines of the above-formed equations are plotted on the same graph paper, then the lines will be _____. c) Find the coordinates of the points where the two lines, when plotted on graph paper, intersect the x-axis