INDIAN SCHOOL AL WADI AL KABIR

Class: X	Department: MATHEMATICS	Date: 22-03-2020
	Topic: Pair of Linear Equations In Two Variables	

1.	Of equations $2x - y = 0$ and $2y - x = 0$ has (A) Infinitely many solutions (B) A unique solution (C) Two solutions (D) No solutions	B
2.	If the lines given by $3x + 2ky = 2$ and $2x + 5y = 1$ are parallel, then the value of k is (A) 5 (B) $\frac{15}{4}$ (C) $\frac{4}{15}$ (D) $\frac{1}{5}$	B
3.	The pair of linear equations $y = 0$ and $y = -6$ has (A) a unique solution (B) no solution (C) infinitely many solutions (D) only solution (0, 0)	B
4.	The value of k for which $3x - y + 8 = 0$ and $6x + ky = -16$ represent coincident lines, is (A) $\frac{-1}{2}$ (B) $\frac{1}{2}$ (C) 2 (D) -2	D
5.	The length and breadth of a rectangular plot are in the ratio 7:5. If the length is reduced by 5 metres and breadth is increased by 2 metres, then the area is reduced by 65 m^2.The length and breadth of the plot are (A) 25, 35 (B) 21, 15 (C) 35, 25 (D) 49,35	C
6.	If a pair of linear equations is consistent, then the lines will be _____. Ans: intersecting or coincident	
7.	The value of k for which the pair of equations $4x + 6y - 1 = 0$ and $2x + ky - 7 = 0$ represents parallel lines is _____.	3
8.	$kx + 2y = 5$, $3x + y = 1$ has a unique solution if _____	$k \neq 6$
9.	The line represented by $x = 5$ is parallel to the _____ axis.	y
10.	The pair of linear equations $x = 2y$ and $y = 2x$ has _____ solution.	unique
11.	Solve the following pair of equations graphically. $x + 3y = 6$; $2x - 3y = 12$	

12.	Solve for x and y: $\frac{5}{x+1} - \frac{2}{y-1} = \frac{1}{2}$; $\frac{10}{x+1} + \frac{2}{y-1} = \frac{5}{2}$	x=4, y =5
13.	The sum of a two-digit number and another formed by reversing its digits is 99. Five added to the number yields 4 less than 6 times the sum of its digits. Find the number.	45
14.	Find the values of p and q so that the pair of linear equations (2p – 1) x + 3y – 5 = 0 and 3x + (q – 1) y – 15 = 0 has infinite number of solutions.	p= 1, q=10
15.	Solve the following pair of equations for x and y: ax + by =3ab ; $a^2x + b^2y = a + b$ Ans: x = $\frac{3ab^2 - a - b}{a(b-a)}$, y = $\frac{3ba^2 - a - b}{b(a-b)}$	
16.	Find the value(s) of k so that the pair of equations x + 2y = 5 and 3x + ky + 15 = 0 has a unique solution.	k≠ 6
17.	Sumit is 3 times as old as his son. Five years later, he shall be two and a half times as old as his son. How old is Sumit at present?	45yrs
18.	A part of monthly hostel charges in a college hostel are fixed and the remaining depends on the number of days one has taken food in the mess. When a student A takes food for 25 days, he has to pay ₹4,500, whereas a student B who takes food for 30 days, has to pay ₹ 5,200. Find the fixed charges per month and the cost of food per day.	1000₹ 140₹
19.	5 pencils and 7 pens together cost ₹ 250 whereas 7 pencils and 5 pens together cost ₹302.Find the cost of one pencil and that of a pen.	₹36, ₹10
20.	Solve the following pair of equations using cross – multiplication method: x – 3y – 7 =0; 3x – 5y – 15 = 0	x =$\frac{5}{2}$, y =$\frac{-3}{2}$
21.	Solve for x and y: 99x + 101y = 499; 101x + 99y = 501	x=3, y = 2
22.	The numerator of a fraction is 4 less than its denominator. If the numerator is decreased by 2 and the denominator is increased by 1, the denominator becomes 8 times its numerator. Find the fraction.	$\frac{3}{7}$
23.	Solve for *x* and y: $\frac{2}{x} + \frac{2}{3y} = \frac{1}{6}$; $\frac{3}{x} + \frac{2}{y}$ = 0, x ≠ 0, y ≠ 0 and hence find the value of 'a' for which y=ax- 4	x=6, y = -4 a = 0
24.	Solve the following pair of linear equations graphically: x+2y=8; 2x-3y=2 Also shade the triangular region formed by the lines obtained in the graph and y – axis.	