Class X - Mathematics Chapter wise Test 3 of 2023

MM20   Pairs of Linear Equations in two variables   Time 50 Min

Section A – 1 Mark Each

Q1.   Solution of $2x - 3y = 5$ and $3x - 2y = 5$ is _____
(A) $x = 1, y = -1$ (B) $x = 1, y = 2$ (C) $x = 2, y = 1$ (D) $x = 2, y = -2$

Q2.   The graph of $2x - 3y = 0$ is
(A) parallel to x axis (B) parallel to x axis (C) Passes through origin (D) None of the rest

Section B – 2 marks each

Q3.   Solve: $113 x + 115 y = 343$ and $115 x + 113 y = 341$

Q4.   Write a pair of linear equations which has the unique solution $x = -2, y = 5$. How many such pairs can you write?

Section C – 3 marks each

Q5.   For which values of p and q, will the following pair of linear equations have infinitely many solutions? $4x + 5y = 2$, $(2p + 7q) x + (p + 8q) y = 2q - p + 1$.

Q6.   The age of the father is five times the sum of the ages of his three children. After 5 years, his age will be three times the sum of the ages of his children. Find the age of the father.

Section D – 4 marks each

Q7.   Draw the graphs of the pair of linear equations $x - y + 2 = 0$ and $4x - y - 4 = 0$. Calculate the area of the triangle formed by the lines so drawn and the x-axis.

Q8.   A shopkeeper sells a saree at 8% profit and a sweater at 10% discount, thereby, getting a sum Rs 1008. If she had sold the saree at 10% profit and the sweater at 8% discount, she would have got Rs 1028. Find the cost price of the saree and the list price (price before discount) of the sweater

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