Edu-Excel

Subject - MATHEMATICS
Topic -SIMULTANEOUS EQUATIONS

SIMULTANEOUS EQUATIONS

PAPER 2

1. Solve the simultaneous equations $x + 2y = x^2 - 3y + y^2 = 4$. [5 *marks*]

2. Solve the simultaneous equations $x + \dfrac{y}{2} = 1$ and $y^2 - 10 = 2x$. [5 *marks*]

3. Solve the simultaneous equations $2y - x = 1$ and $\dfrac{4}{x} + \dfrac{3}{y} = 7$. [6 *marks*]

4. Solve the simultaneous equations $2x + 3y + 1 = 0$ and $y^2 + 6xy + 6 = 0$.
   Give your answers correct to three decimal places. [5 *marks*]

5. Solve the simultaneous equations $4x + y + 8 = x^2 + x - y = 2$. [5 *marks*]

6. Solve the simultaneous equations $\dfrac{x}{3} + \dfrac{2}{y} = 4$ and $x + 6y = 3$. [6 *marks*]

7. Solve the simultaneous equations $2x + 3y = 9$ and $\dfrac{6y}{x} - \dfrac{x}{y} = -1$. [6 *marks*]

8. Solve the simultaneous equations $3x - 2y = 5$ and $x^2 + y^2 - y - 3 = 0$. [5 *marks*]

9. Solve the simultaneous equations $2y^2 = 3(1 - x)$ and $\dfrac{y}{x} = 3$. [5 *marks*]

10. Solve the simultaneous equations $2x + y = 9$ and $x(1 - y) = 3x^2 + 1$.
    Give your answers correct to two decimal places. [5 *marks*]

11. Solve the simultaneous equations $2x + y = 1$ and $2x^2 + y^2 + xy = 5$.
    Give your answers correct to three decimal places. [5 *marks*]

ANSWERS – SIMULTANEOUS EQUATIONS

1. $x = \dfrac{12}{5}, y = \dfrac{4}{5}$; $x = -2, y = 3$

2. $x = 3, y = -4$; $x = -\dfrac{1}{2}, y = 3$

3. $x = 1, y = 1$; $x = -\dfrac{4}{7}, y = \dfrac{3}{14}$

4. $x = 1.105, y = -1.07$; $x = -1.55, y = 0.70$

5. $x = -1, y = -2$; $x = -4, y = 10$
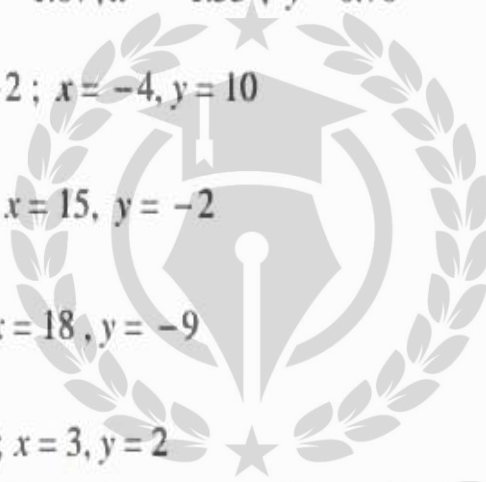
6. $x = 0, y = \dfrac{1}{2}$; $x = 15, y = -2$

7. $x = 3, y = 1$; $x = 18, y = -9$

8. $x = \dfrac{9}{5}, y = \dfrac{1}{5}$; $x = 3, y = 2$

9. $x = \dfrac{1}{3}, y = 1$; $x = -\dfrac{1}{2}, y = -\dfrac{3}{2}$

10. $x = -7.87, y = 24.75$; $x = -0.13, y = 9.25$

11. $x = 1.443, y = -1.886$; $x = -0.6930, y = 2.386$