



CHAPTER 4: SIMULTANEOUS EQUATIONS



Paper 2

1. Solve the simultaneous equations $3x + y = 2$ and $2x^2 + y^2 + 2xy = 1$.

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2. Solve the simultaneous equations $\frac{3x}{y} + \frac{2y}{x} = 7$ and $3y - x = 1$.
3. Solve the simultaneous equations $x^2 + y^2 - xy = 2x - y + 3 = 7$.
4. The straight line $y = x + 5$ intersects the curve $y = x^2 + 5x - 7$ at two points. Find the coordinates of these two points.
5. Solve the simultaneous equations $3x + y = 5$ and $2x^2 + xy + 5 = 0$. Give your answers correct to four significant figures.
6. Given a right-angled triangle ABC where $AB = 2x$ cm, $BC = (4x - 1)$ cm, $AC = (3y + 8)$ cm and $\angle ABC = 90^\circ$.
- (a) Show that $20x^2 - 9y^2 - 8x - 48y - 63 = 0$.
- (b) Given that the perimeter of triangle ABC is 40 cm, find the values of x and y .