

SOLUTION SET OF SIMULTANEOUS EQUATIONS

- 2 Find algebraically the coordinates of the intersection points of:
- (a) the straight line $y = x - 3$ and the circle $x^2 + y^2 = 9$
 - (b) the straight line $y = 2x - 1$ and the parabola $y = x^2 - 3x + 5$
 - (c) the straight line $y = 3 - 2x$ and the parabola $y = (x - 2)^2$

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- 3 For what value of c is the line $y = 2x + c$ a tangent to the parabola $y = x^2 - x - 2$?
- A $c = -4.25$ B $c = 0.25$ C $c = -2.25$ D $c = 4.25$

- 4 For what value of c is the line $y = x + c$ a tangent to the circle $x^2 + y^2 = 4$?

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7 For what value of m does the line $y = mx - 6$ (a) touch (b) intersect (c) not intersect the parabola $y = x^2 - 2x + 3$?

11 For what value of a does the line $y = ax$ not meet the rectangular hyperbola $y = \frac{3}{x-2}$?