

Crack the Code

Simultaneous Equations

A	Solve $3x - 2y = 34$ $5x + 3y = 44$	B	Solve $2x = 3y - 5.5$ $6y = 5x + 2.5$
C	Solve $\frac{x}{4} + 6 = 3x + y + 2$ $2y = 3(6 - x)$	D	Solve $2x + y = 22$ $3xy = 180$
E	Solve $x^2 + y^2 = 20$ $2y = x$	F	Solve $x + y = 10$ $3y^2 - 2xy = 25$
G	Solve $x^2 - xy + y^2 = 49$ $2y = x + 7$	H	The solution to the pair of equations $ax + 5y = 17$ $3x - 4y = b$ is $x = 2a, y = -3$ Find the positive values of a and b
I	Determine the number of points of intersection of the line $y = 3 - 2x$ and the curve $y = 3x^2 + 5x - 8$	J	The line $3y = kx + 17$ meets the curve $x^2 + 2y^2 = 34$ at exactly one point. Find the positive value of k .

To get the three-digit code, add together all your answers.