

(12) Solving Linear Simultaneous Equations

WORKING AT D/E

(1) Solve the simultaneous equations:

$$2x + 5y = 14$$

$$3x - 2y = 2$$

(2) Solve the simultaneous equations:

$$y = 2x + 4$$

$$y = 7x - 11$$

(3) Show there are no solutions to the simultaneous equations

$$y = 3x + 6$$

$$y = 3x - 1$$

WORKING AT B/C

(1) Solve the simultaneous equations:

$$0.1x + 4y = 9$$

$$0.3x - y = 1$$

(2) Solve the simultaneous equations:

$$3y = 6 - 3x$$

$$2y = 5x - 3$$

(3) The line simultaneous equations below have no solutions:

$$3x + py = 14$$

$$2x - 7y + 9 = 0$$

Given that p is a constant, find the value of p .

WORKING AT A*/A

(1) A square has side lengths $x + y$ and a perimeter of 24cm. A rectangle has side lengths of y and $x + 2y$. Its perimeter is $\frac{2}{3}$ that of the square. How much larger is the area of the square than the area of the rectangle?

(2) The linear simultaneous equations:

$$qx + py = 26$$

$$4x - y + q = 0$$

have the solutions $x = 0.5p$ and $y = 7$. Find the integer values of the constants p and q .

(3) Write a pair of linear simultaneous equations that have no solutions.