

Ex 22 Simultaneous Equations

Section A (Non-calculator)

- 1 Evaluate –
- a) 70% of £24
- b) $23 - 4 \cdot 2 \div 7$
- c) $x^2 + \frac{x}{y}$ where $x = -4$ and $y = -2$
- d) 78×69

Section B (Knowledge)

Only use your calculator if you need to!

- 2 Solve these simultaneous equations by drawing their graphs on squared paper:

$$\begin{aligned}x - y &= -1 \\x + 2y &= 8\end{aligned}$$

- 3 Solve these pairs of equations by substitution.

a) $y = x$
 $y = 2x + 4$

b) $y = 3x$
 $x + y + 12 = 0$

- 4 Solve these simultaneous equations by elimination.


a) $x + 3y = 3$
 $x - 3y = 9$

b) $2p + q = 17$
 $p + q = 9$

c) $a + 3b = 8$
 $2a - b = 1$

d) $2c + 3d = -5$
 $3c + 2d = 0$

- 5 The tickets for a school show cost £2 for children and £3 for adults.

SCHOOL SHOW	
CHILDREN £2	
ADULTS £3	

- a) x tickets were sold to children and y tickets were sold to adults. The total money collected for tickets was £460. Use this information to write an equation involving x and y .
- b) 190 people bought tickets for the disco. Write down another equation involving x and y .
- c) How many tickets were sold to adults?

Section C (Mixed)

- 6 A newspaper report stated – “Concorde has now flown $9 \cdot 5 \times 10^7$ miles”. This is equivalent to 400 journeys from the earth to the moon. Calculate the distance from the earth to the moon. Give your answer in scientific notation correct to 2 significant figures.
- 7 Below are the temperature forecasts in °C for the next five days.

-5 0 4 -3 5

Work out the mean temperature.