

ALGEBRA

- 3 VARIABLE SIMULTANEOUS EQUATIONS

10+ Questions to help you gain confidence in this topic.

- 1 ► 2022 LCHL Paper 1 – Question 2 (b)
- 2 ► 2018 LCHL Paper 1 – Question 1 (a)
- 3 ► 2014S LCHL Paper 1 – Question 4 (a)
- 4 ► 2013 LCHL Paper 1 – Question 2 (b)
- 5 ► 2010 LCHL Paper 1 – Question 2 (a)
- 6 ► 2007 LCHL Paper 1 – Question 2 (a)
- 7 ► 2002 LCHL Paper 1 – Question 2 (a)
- 8 ► 2000 LCHL Paper 1 – Question 2 (a)
- 9 ► 1996 LCHL Paper 1 – Question 2 (a)
- 10 ► 1994 LCHL Paper 1 – Question 1 (b)

- +11 ► 1983 LCHL Paper 1 – Question 2 (a)

Visit www.mathspoints.ie for
worked solutions to these questions.

1 ► 2022 LCHL Paper 1 – Question 2 (b) (ii)

The areas of three regions **K**, **L** and **N** give the following three equations.

$$4a + 3b + 3c = 807$$

$$28a + 9b + 3c = 879$$

$$76a + 15b + 3c = 663$$

Solve these equations to find the values of a , b and c .

$a =$ _____ $b =$ _____ $c =$ _____

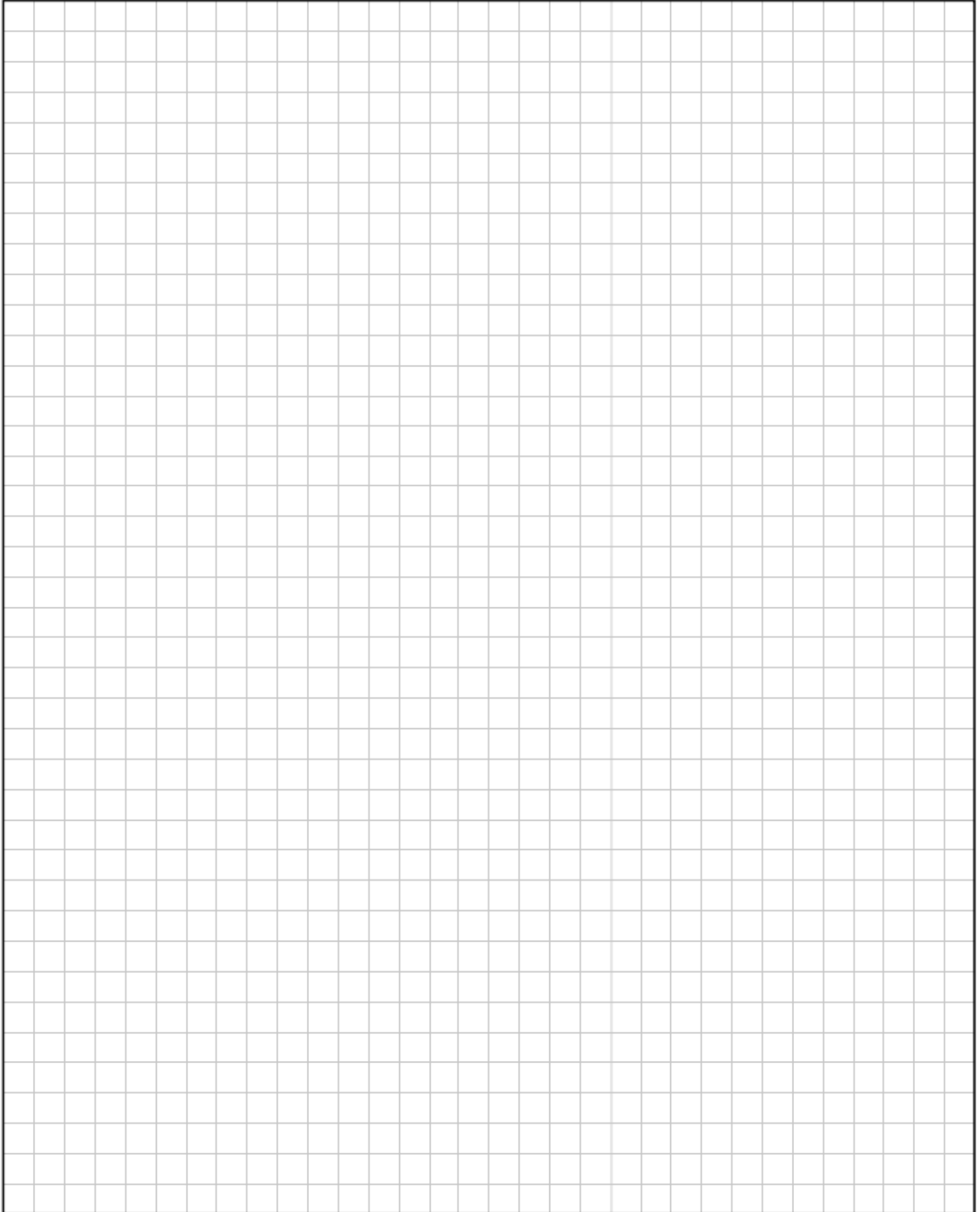
2 ► 2018 LCHL Paper 1 – Question 1 (a)

Solve the simultaneous equations.

$$2x + 3y - z = -4$$

$$3x + 2y + 2z = 14$$

$$x - 3z = -13$$



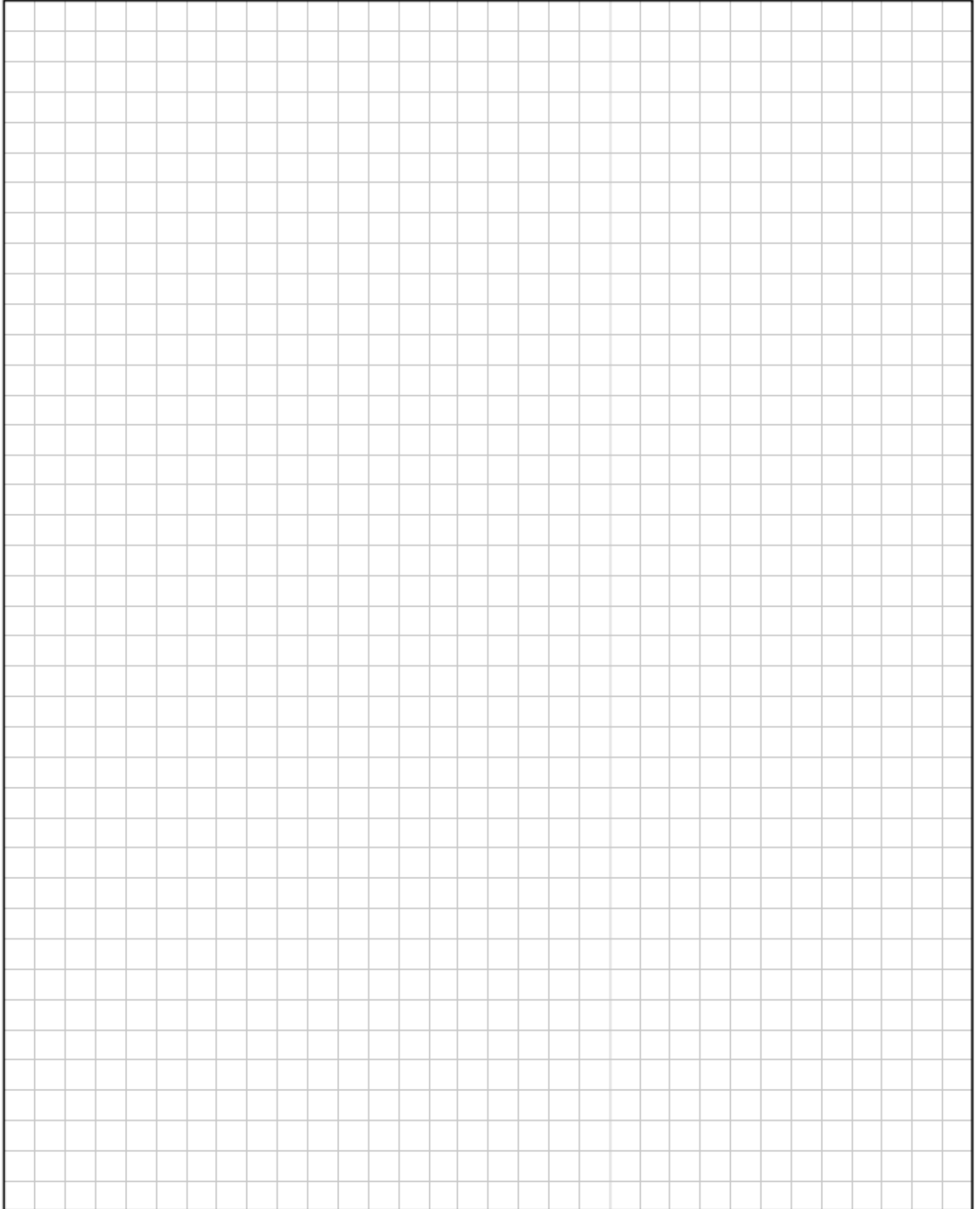
3 ► 2014 LCHL Sample Paper 1 – Question 4 (a)

Solve the simultaneous equations:

$$2x + 8y - 3z = -1$$

$$2x - 3y + 2z = 2$$

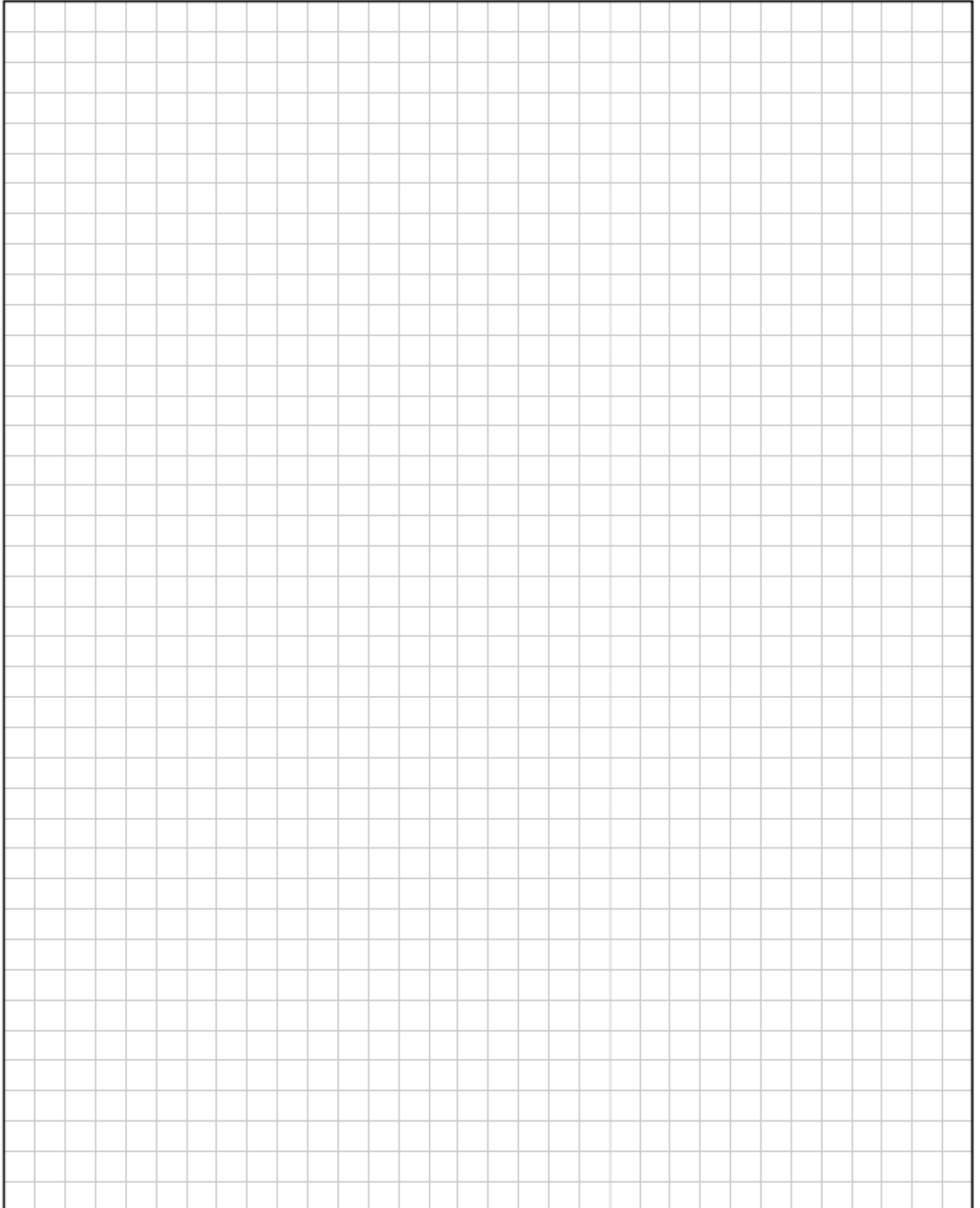
$$2x + y + z = 5$$



4 ► 2013 LCHL Paper 1 – Question 2 (b)

Solve the simultaneous equations

$$\begin{aligned}x + y + z &= 16 \\ \frac{5}{2}x + y + 10z &= 40 \\ 2x + \frac{1}{2}y + 4z &= 21\end{aligned}$$



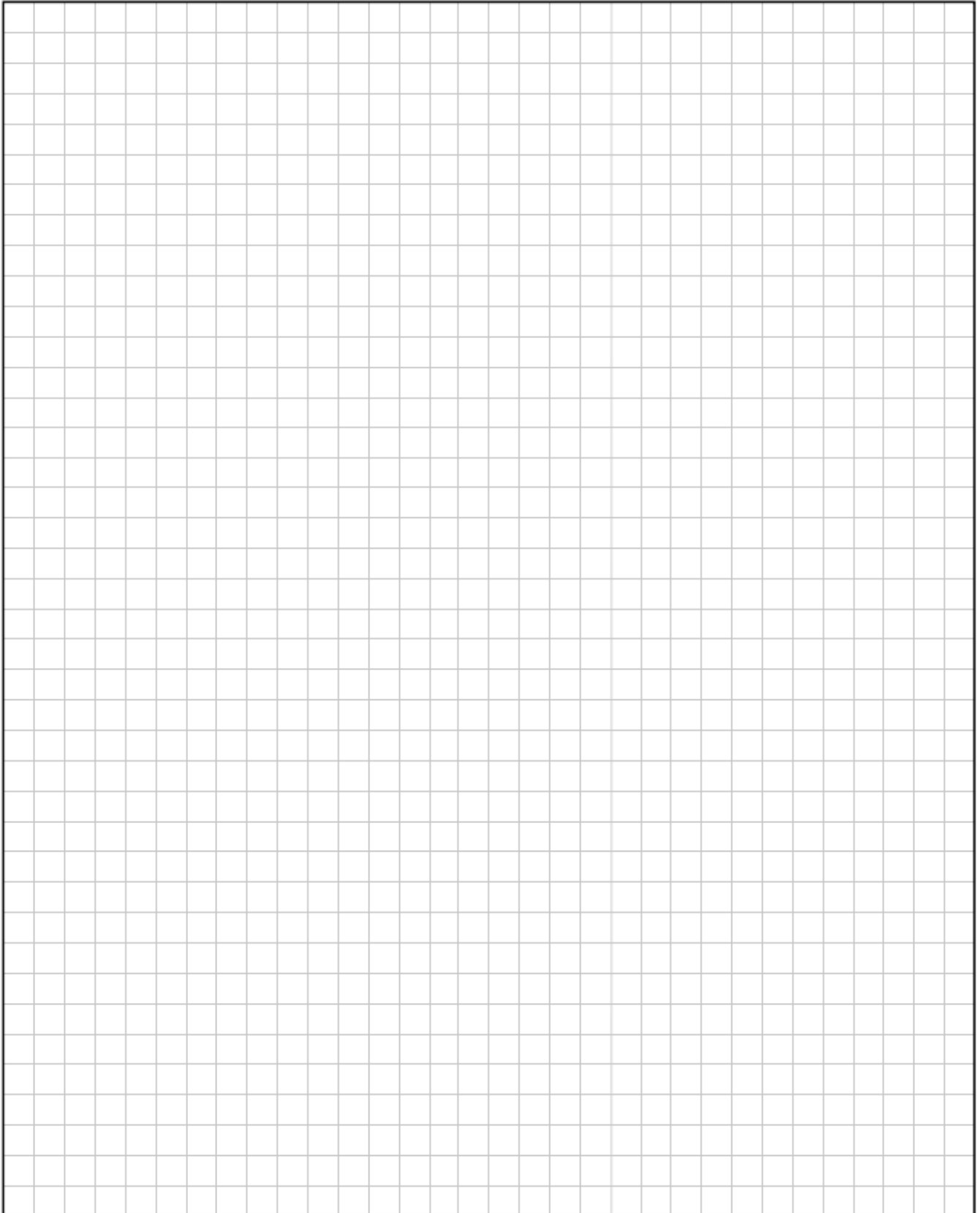
5 ► 2010 LCHL Paper 1 – Question 2 (a)

Solve the simultaneous equations

$$2x + 3y = 0$$

$$x + y + z = 0$$

$$3x + 2y - 4z = 9$$



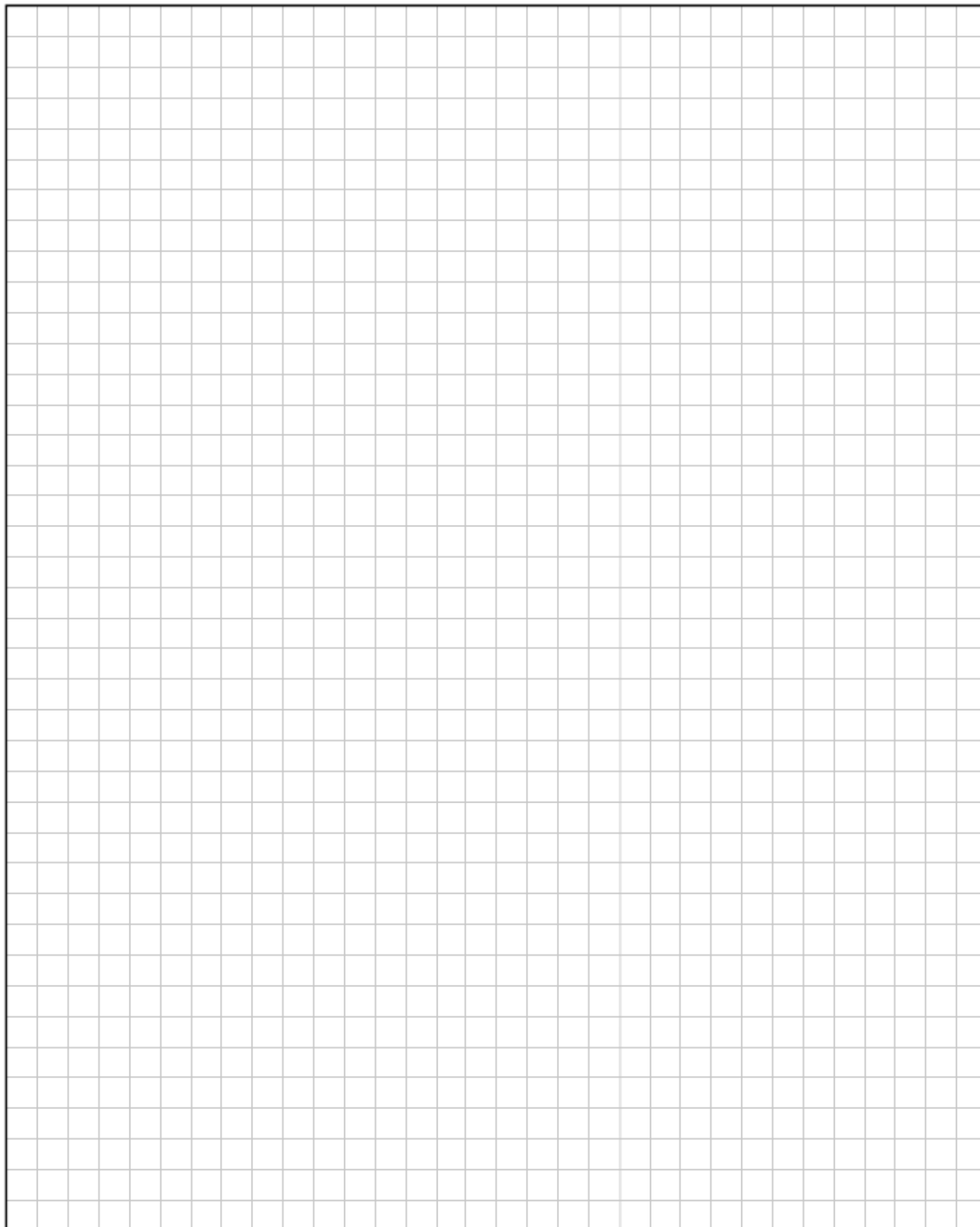
6 ► 2007 LCHL Paper 1 – Question 2 (a)

Without using a calculator, solve the simultaneous equations

$$x + y + z = 2$$

$$2x + y + z = 3$$

$$x - 2y + 2z = 15$$



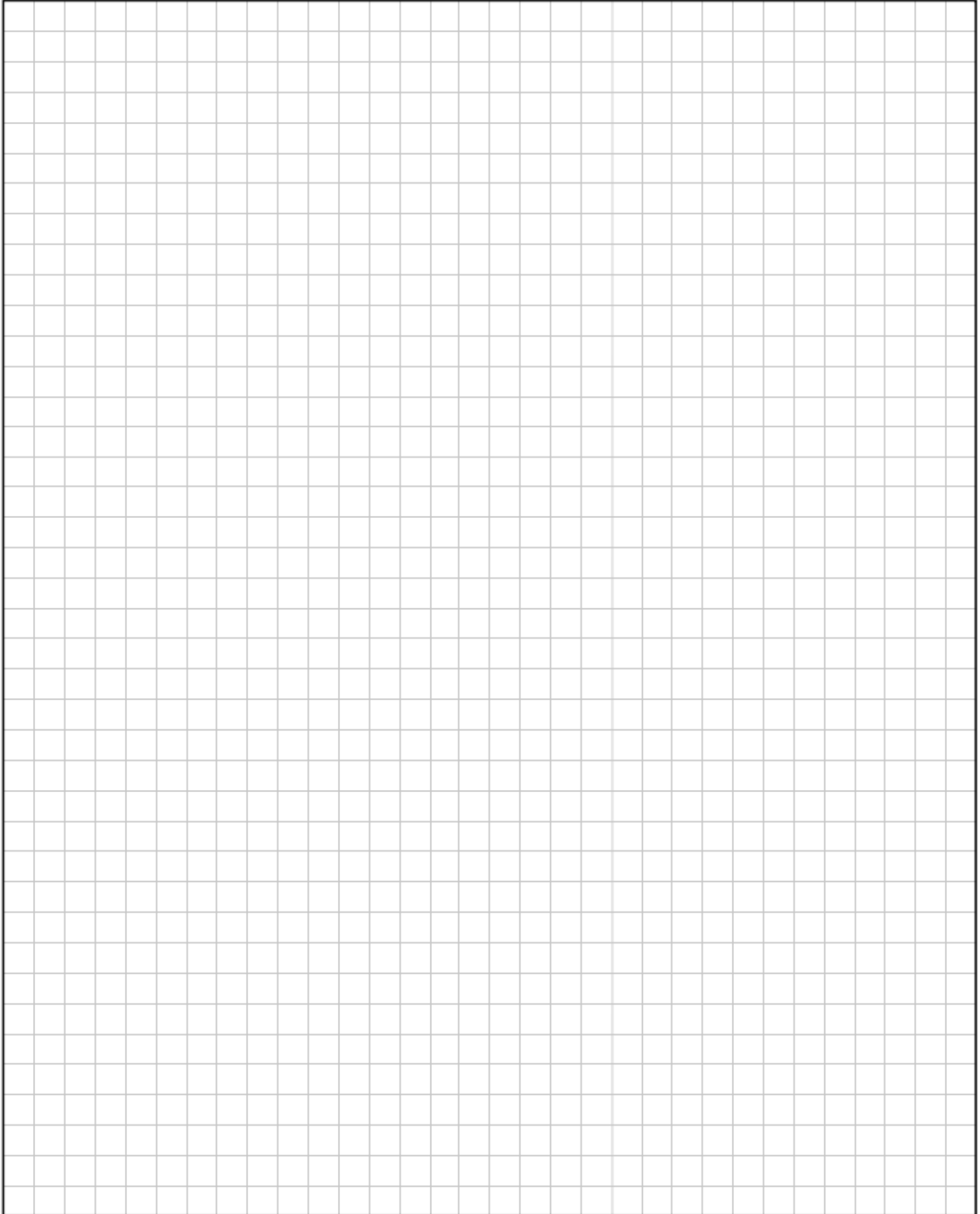
7 ► 2002 LCHL Paper 1 – Question 2 (a)

Solve without using a calculator, the following simultaneous equations:

$$x + 2y + 4z = 7$$

$$x + 3y + 2z = 1$$

$$-y + 3z = 8$$



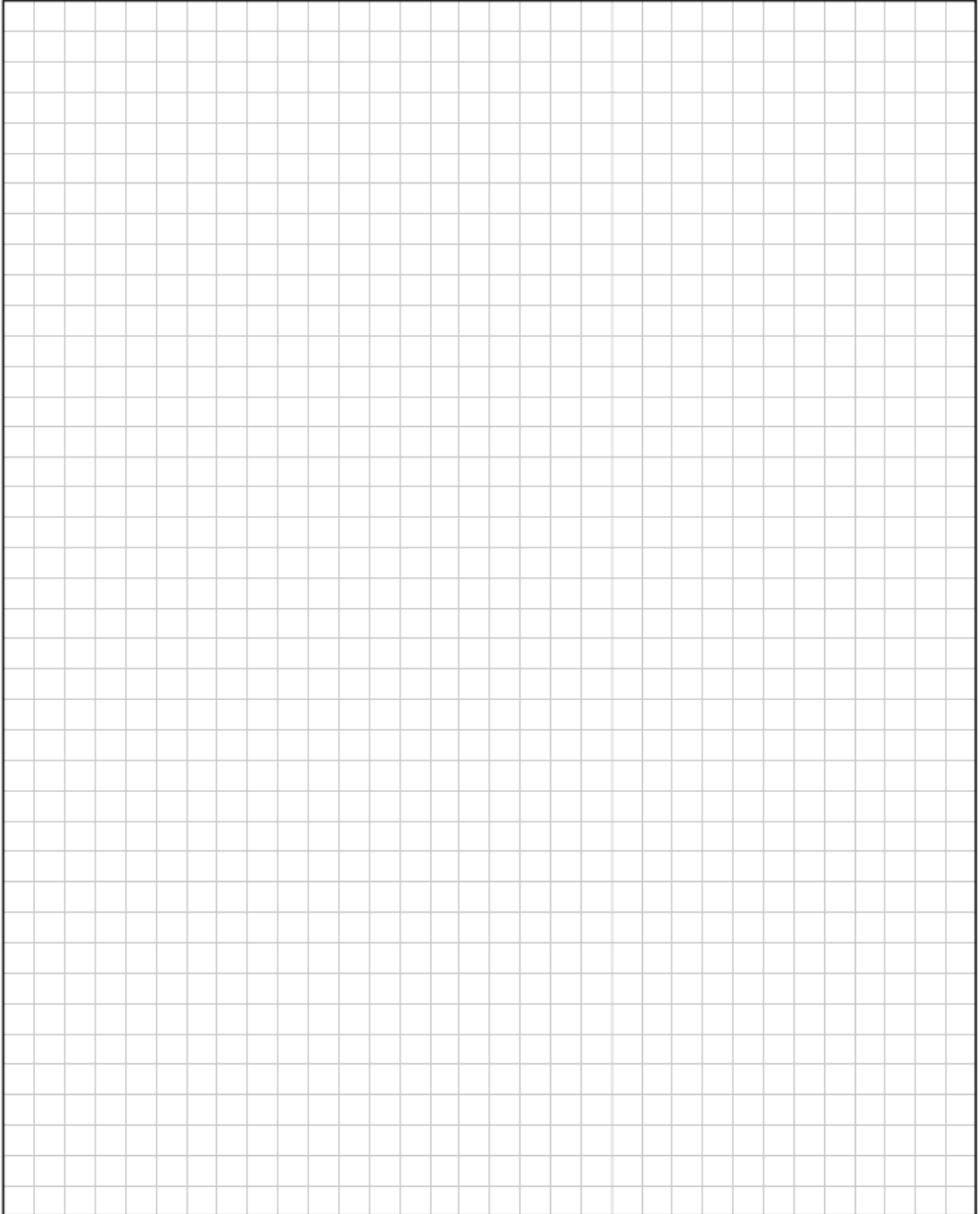
8 ► 2000 LCHL Paper 1 – Question 2 (a)

Solve for x , y , z

$$3x - y + 3z = 1$$

$$x + 2y - 2z = -1$$

$$4x - y + 5z = 4$$



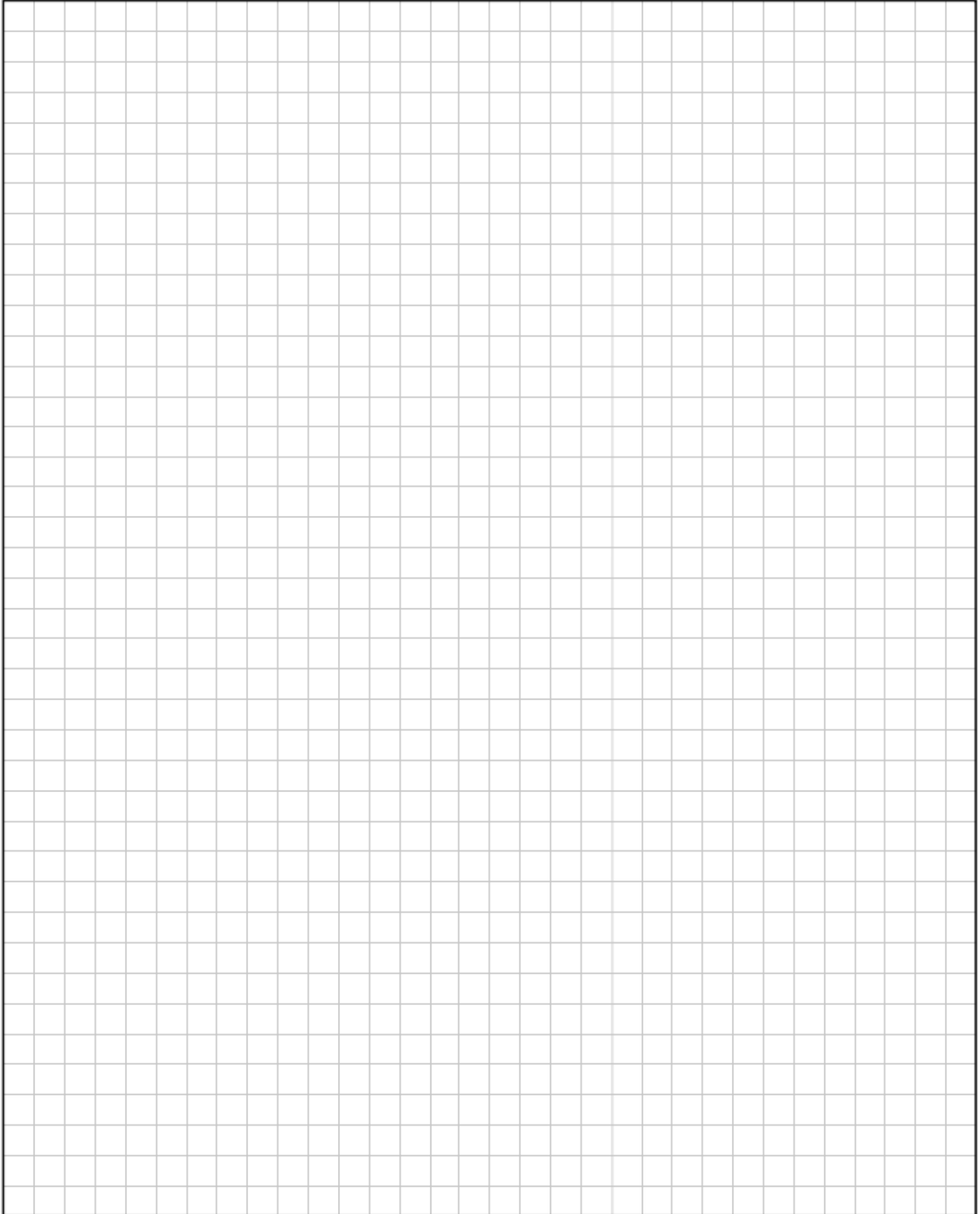
9 ► 1996 LCHL Paper 1 – Question 2 (a)

Solve for x, y, z

$$x + y - z = 0$$

$$x - y + z = 4$$

$$x - y - z = -8$$



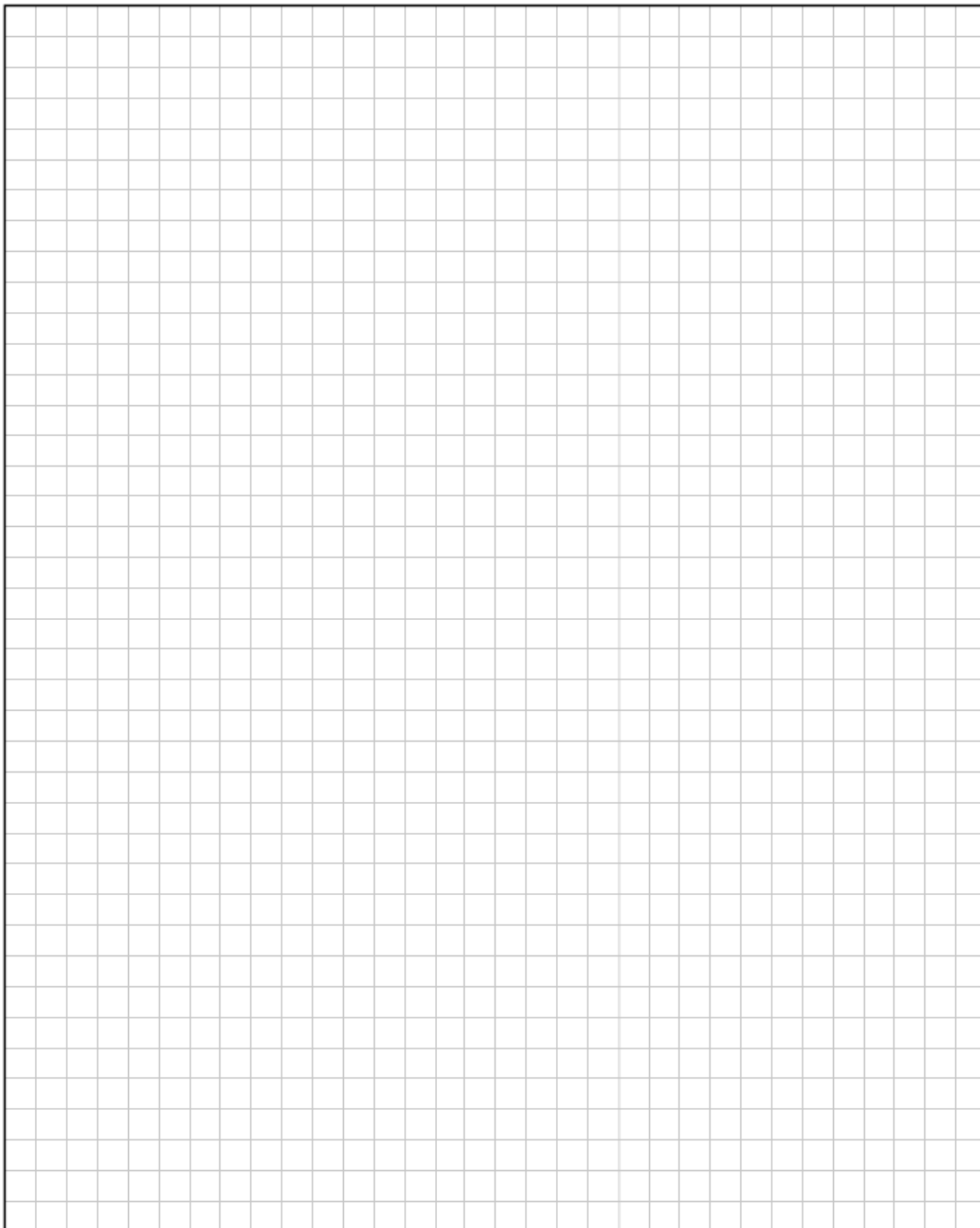
10 ► 1994 LCHL Paper 1 – Question 1 (a)

Solve the simultaneous equations

$$3x + 5y - z = -3$$

$$2x + y - 3z = -9$$

$$x + 3y + 2z = 7$$



11 ► 1983 LCHL Paper 1 – Question 2 (a)

Solve

$$2x + y + z + 7 = 0$$

$$x + 2y + z + 8 = 0$$

$$x + y + 2z + 9 = 0$$

