

Further Maths Summer Work: Simultaneous equations in 3
unknowns

Solve these algebraically. Show full working - there will be no credit for the answers alone.

1 $3x + y + z = 9$

$$5x - y - z = -1$$

$$3x + y + 2z = 13$$

2 $2x - y + 3z = 21$

$$2x - y + 6z = 36$$

$$4x + y - 6z = -24$$

3 $x + y + z = 7$

$$2x + y + z = 6$$

$$x + 2y + z = 13$$

4 $4x + 2y + 3z = 32$

$$4x + 2y + 5z = 40$$

$$5x + 2y + 5z = 45$$

5 $x + 5y + 2z = 43$

$$2x - 5y + 2z = -55$$

$$3x + 5y - 4z = 9$$

6 $2x + 3y + 4z = -29$

$$2x + 4y + 5z = -44$$

$$-2x + 5y + 4z = -91$$

7 $3x - 2y + 4z = 7$

$$5x + 4y - 6z = -2$$

$$x + y + 8z = 4$$

8 $4x + 5y + 5z = 8$

$$5x - y + 2z = 2.5$$

$$2x + 3y + 4z = 1.5$$