



ACHIEVE ACADEMY

GCSE Maths — Foundation Tier

Solving Linear Equations · Practice Booklet

NAME: _____

CLASS: _____

DATE: _____

☐ Developing

☒ Secure

☐ Greater Depth

Answer every question in the working space provided. Method marks are available for correct working even if the final answer is wrong. Check the time allowed with your tutor before you start.

Solving Linear Equations

Total marks available: 86

● Solving Linear Equations

$$\checkmark b = 9$$

Q1 · ● Developing · 3 marks

METHOD

$$5b = 46 - 1$$

$$b = 45 \div 5 = 9$$

$$\checkmark x = 3$$

Q2 · ● Developing · 3 marks

METHOD

$$6x = 30 - 12$$

$$x = 18 \div 6 = 3$$

$$\checkmark a = 2$$

Q3 · ● Developing · 2 marks

METHOD

$$a = 8 - 6 = 2$$

$$\checkmark x = -5$$

Q4 · ● Developing · 2 marks

METHOD

$$x = -13 + 8 = -5$$

$$\checkmark a = 10$$

Q5 · ● Developing · 3 marks

METHOD

$$2a = 18 + 2$$

$$a = 20 \div 2 = 10$$

$$\checkmark y = 4$$

Q6 · ● Developing · 3 marks

METHOD

$$\begin{aligned} 9y &= 42 - 6 \\ y &= 36 \div 9 = 4 \end{aligned}$$

$$\checkmark a = 7$$

Q7 · ● Developing · 2 marks

METHOD

$$a = 13 - 6 = 7$$

$$\checkmark x = 7$$

Q8 · ● Developing · 3 marks

METHOD

$$\begin{aligned} 6x &= 46 - 4 \\ x &= 42 \div 6 = 7 \end{aligned}$$

$$\checkmark y = 2$$

Q9 · ● Developing · 3 marks

METHOD

$$\begin{aligned} 7y &= 2 + 12 \\ y &= 14 \div 7 = 2 \end{aligned}$$

$$\checkmark b = 3$$

Q10 · ● Developing · 2 marks

METHOD

$$b = -8 + 11 = 3$$

$$\checkmark y = 4$$

Q11 · ● Secure · 3 marks

METHOD

$$5y - 15 = 5$$

$$5y = 5 + 15$$

$$y = 20 \div 5 = 4$$

$$\checkmark b = 4$$

Q12 · ● Secure · 3 marks

METHOD

$$7b - 21 = 7$$

$$7b = 7 + 21$$

$$b = 28 \div 7 = 4$$

$$\checkmark b = -1$$

Q13 · ● Secure · 3 marks

METHOD

$$-5b + 8 = 13$$

$$-5b = 13 - 8$$

$$b = 5 \div (-5) = -1$$

$$\checkmark x = -9$$

Q14 · ● Secure · 3 marks

METHOD

$$-5x + 5 = 50$$

$$-5x = 50 - 5$$

$$x = 45 \div (-5) = -9$$

$$\checkmark x = -6$$

Q15 · ● Secure · 3 marks

METHOD

$$-3x - 5 = 13$$

$$-3x = 13 + 5$$

$$x = 18 \div (-3) = -6$$

$$\checkmark n = 10$$

Q16 · ● Secure · 3 marks

METHOD

$$-6n - 12 = -72$$

$$-6n = -72 + 12$$

$$n = (-60) \div (-6) = 10$$

$$\checkmark y = 1$$

Q17 · ● Secure · 3 marks

METHOD

$$4y + 11 = 15$$

$$4y = 15 - 11$$

$$y = 4 \div 4 = 1$$

$$\checkmark y = -3$$

Q18 · ● Secure · 3 marks

METHOD

$$3y - 6 = -15$$

$$3y = -15 + 6$$

$$y = -9 \div 3 = -3$$

$$\checkmark x = 6$$

Q19 · ● Secure · 3 marks

METHOD

$$2x + 16 = 28$$

$$2x = 28 - 16$$

$$x = 12 \div 2 = 6$$

$$\checkmark y = 10$$

Q20 · ● Secure · 3 marks

METHOD

$$6y - 11 = 49$$

$$6y = 49 + 11$$

$$y = 60 \div 6 = 10$$

$$\checkmark a = 5$$

Q21 · ● Greater Depth · 3 marks

METHOD

$$-7a = -26 - 9$$

$$a = (-35) \div (-7) = 5$$

$$\checkmark y = 3$$

Q22 · ● Greater Depth · 3 marks

METHOD

$$-7y = -17 - 4$$

$$y = (-21) \div (-7) = 3$$

$$\checkmark b = -12$$

Q23 · ● Greater Depth · 3 marks

METHOD

$$b/2 = -11 + 5$$

$$b = -6 \times 2 = -12$$

$$\checkmark y = 2$$

Q24 · ● Greater Depth · 3 marks

METHOD

$$-7y = -26 + 12$$

$$y = (-14) \div (-7) = 2$$

$$\checkmark y = 12$$

Q25 · ● Greater Depth · 3 marks

METHOD

$$y/6 = -2 + 4$$

$$y = 2 \times 6 = 12$$

$$\checkmark n = 9$$

Q26 · ● Greater Depth · 3 marks

METHOD

$$-3n = -20 - 7$$

$$n = (-27) \div (-3) = 9$$

$$\checkmark n = 8$$

Q27 · ● Greater Depth · 3 marks

METHOD

$$n/4 = -7 + 9$$

$$n = 2 \times 4 = 8$$

$$\checkmark x = -8$$

Q28 · ● Greater Depth · 3 marks

METHOD

$$-6x = 39 + 9$$

$$x = 48 \div (-6) = -8$$

$$\checkmark y = 5$$

Q29 · ● Greater Depth · 3 marks

METHOD

$$-7y = -35$$

$$y = (-35) \div (-7) = 5$$

$$\checkmark x = 5$$

Q30 · ● Greater Depth · 3 marks

METHOD

$$x/5 = 6 - 5$$

$$x = 1 \times 5 = 5$$