

Solving Equations

June 2023 Paper 1

Question	Answer	Mark	Mark scheme	Additional guidance
5	5	B1	cao	

November 2024 Paper 3

Question	Answer	Mark	Mark scheme	Additional guidance
6 (a)	5	B1	cao	
(b)	17	B1	cao	
(c)	8	B1	cao	

November 2022 Paper 1

Question	Answer	Mark	Mark scheme	Additional guidance
8 (a)	7	B1	cao	
8 (b)	6	M1	for $4n (= 24)$ or $24 \div 4$	
		A1	cao	

June 2020 Paper 2

Question	Answer	Mark	Mark scheme	Additional guidance
10 (a)	12	B1	cao	
(b)	4	B1	cao	

November 2022 Paper 2

Question	Answer	Mark	Mark scheme	Additional guidance
14 (a)	$7c + 6d$	M1	for $7c$ or $6d$	
		A1	for $7c + 6d$	
(b)	7	M1	for correct method to expand, eg $5 \times 2m - 5 \times 6$, or divides both sides by 5 as a first step.	
		M1	for correct method to isolate terms in m , eg $10m - 30 + 30 = 40 + 30$	
		A1	cao	
(c)	$3x + 2y$	M1	for $3x$ or $2y$	Condone use of b and p
		A1	cao	

June 2020 Paper 3

Question	Answer	Mark	Mark scheme	Additional guidance
14 (a)	$5x + y$	M1	for method to collect terms, eg $5x$ or y	May be seen in working. Accept if no ambiguity. Accept $1y$.
(b)	3	A1	cao	
		M1	for subtracting 7 from both sides or dividing each term by 5 as a first step, eg $5p = 15$ or $5p = 22 - 7$ or $\frac{5p}{5} + \frac{7}{5} = \frac{22}{5}$	Must be carried out, not just intention. Division by 5 must be all terms.
		A1	cao	

November 2024 Paper 1

Question	Answer	Mark	Mark scheme	Additional guidance
15 (a)	$3(2a + 5)$	B1		
(b)	2	M1	for correct expansion of brackets, ie $12y + 4$ or dividing throughout by 4 as a first step to solve equation, eg $3y + 1 = 28 \div 4$	For M marks step must be carried out not just intention shown. For example, if you see $\begin{array}{r} 4(3y + 1) = 28 \\ \div 4 \qquad \qquad \div 4 \end{array}$ Award M1 for: $3y + 1 = k$ with $k \neq 28$ or 112
		M1	for isolating terms in y, eg $12y = 28 - 4$ or $3y = 7 - 1$	fit their equation of the form $ay \pm b = c$ For example, if you see $\begin{array}{r} 12y + 4 = 28 \\ -4 \qquad \qquad -4 \end{array}$ Award M1 for: $12y = k$ with $k \neq 28$ or 32
		A1	cao	

November 2021 Paper 1

Question	Answer	Mark	Mark scheme	Additional guidance
15 (a)	$2a + 2d$	B1	cao	Accept $2 \times a + 2 \times d$
(b)	$y(6y - 5)$	B1	cao	Accept $y \times (6y - 5)$
(c)	11	M1 A1	for isolating x terms, eg $4x = 37 + 7$ or $4x = 44$ or for $x - \frac{7}{4} = \frac{37}{4}$ or for $37 + 7 = 44$ followed by “44” $\div 4$ (= 11) cao	

November 2023 Paper 3

Question	Answer	Mark	Mark scheme	Additional guidance
16	-35	M1 A1	for a correct first step, eg shows $\frac{x}{7} + 9 - 9 = 4 - 9$ or $\frac{x}{7} = 4 - 9$ or $\frac{7x}{7} + 9 \times 7 = 4 \times 7$ or $x + 63 = 28$ cao	

June 2024 Paper 1

Question	Answer	Mark	Mark scheme	Additional guidance
17	3.5	M1	for correct expansion of brackets, ie $8x - 10$ or dividing throughout by 2 as a first step to solve equation, eg $4x - 5 = 9$	For M marks step must be carried out not just intention shown. For example, if you see $\begin{array}{r} 2(4x - 5) = 18 \\ \div 2 \qquad \qquad \div 2 \end{array}$ Award M1 for: $4x - 5 = k$ with $k \neq 18, 36$
		M1	for isolating terms in x , eg $8x = 18 + 10$ or $4x = 9 + 5$	ft their equation of the form $ax \pm b = c$ For example, if you see $\begin{array}{r} 8x - 10 = 18 \\ +10 \qquad \qquad +10 \end{array}$ Award M1 for: $8x = k$ with $k \neq 8, 18$
		A1	for 3.5 or $3\frac{1}{2}$ oe or $\frac{7}{2}$ oe	

June 2022 Paper 3

Question	Answer	Mark	Mark scheme	Additional guidance
17 (a)	$12 - 6x$	B1	for $12 - 6x$ (accept $-6x + 12$)	
(b)	16	M1	for a correct first step, eg. $3y = 12 \times 4 (= 48)$ or $\frac{y}{4} = \frac{12}{3}$	Do not accept ambiguous algebraic expressions
		A1	cao	
(c)	$2(2p + 3)$	B1	cao	Do not accept equivalent expressions not fully factorised

June 2023 Paper 3

Question	Answer	Mark	Mark scheme	Additional guidance
18	4	M1 M1 A1	for a correct first step eg shows $4 \times 2x - 4 \times 3$ or $8x - 12$ or $2x - 3 = \frac{20}{4}$ for isolating terms in x eg $2x = 5 + 3$ cao	

June 2020 Paper 1

Question	Answer	Mark	Mark scheme	Additional guidance
19 (a)	$x^2 - 4x$	B1	cao	
(b)	$5(3y - 2)$	B1	cao	
(c)	9	M1	for a correct first stage, eg. expanding brackets, $7 \times f - 7 \times 5 (= 28)$ oe or for division of both sides by 7, eg. $\frac{7(f-5)}{7} = \frac{28}{7}$	
		A1	cao	

November 2023 Paper 2

Question	Answer	Mark	Mark scheme	Additional guidance
25	11	M1	for one correct step to isolate x term or constant term on one side, eg adds x to both sides to get $5x - 14 + x = 52 - x + x$ or adds 14 to both sides to get $5x - 14 + 14 = 52 - x + 14$ oe	May be seen in different equivalent forms but must be carried out, not just intention seen. Can be implied by eg $4x = 66$ or $6x = 38$
		M1	for both correct steps to isolate terms in x on one side and constant term on one side, eg “ $6x$ ” $- 14 + 14 = 52 + 14$, or $5x + x = “66” + x - x$	
		A1	cao	