

Mark Scheme

Q1.

Question	Answer	Mark	Mark scheme	Additional guidance
	$9p + 13$	M1 A1	for method to expand one bracket, eg $5 \times p + 5 \times 3 (= 5p + 15)$ or $2 \times 1 - 2 \times 2p (= 2 - 4p)$ or $-2 \times 1 - 2 \times -2p (= -2 + 4p)$ cao	If an attempt is made to multiply by -2 in the second brackets then it must be done consistently.

(Q20 1MA1/3F, June 2018)

Q2.

Paper 1MA1: 1H			
Question	Working	Answer	Notes
		$m^2 + 10m + 21$	M1 for at least 3 terms out of a maximum of 4 correct from expansion A1

(Q02 1MA1/1H/N, Specimen papers)

Q3.

Paper 1MA1: 1F			
Question	Working	Answer	Notes
		$x^2 + 2x - 3$	M1 starts expansion: at least 3 terms correct with signs, or four terms correct ignoring signs A1 for $x^2 + 2x - 3$

(Q27 1MA1/1F/S1, Specimen papers)

Q4.

Question	Answer	Mark	Mark scheme	Additional guidance
	$6x^3 + x^2 - 20x - 12$	M1 M1 A1	for method to find the product of any two linear expressions (3 out of no more than 4 terms correct with correct signs or 4 correct terms ignoring signs), eg. $6x^2 + 9x + 4x + 6$ or $3x^2 + 2x - 6x - 4$ or $2x^2 + 3x - 4x - 6$ for method of multiplying out remaining products, half of which are correct (ft their first product), eg. $6x^3 + 13x^2 - 12x^2 + 6x - 26x - 12$ cao	Note that, for example, $6x^2 + 13x$ or $13x + 6$ are regarded as three terms in the expansion of $(x - 2)(3x + 2)$ First product must be quadratic but need not be simplified or may be simplified incorrectly.

(Q12 1MA1/2H, Nov 2021)

Q5.

Question	Answer	Mark	Mark scheme	Additional guidance
	$6x^3 - 23x^2 - 33x - 10$	M1	for method to find the product of any two linear expressions (3 out of no more than 4 terms correct with correct signs or 4 correct terms ignoring signs)	Note that, for example, $6x^2 + 7x$ or $7x + 2$ are regarded as three terms in the expansion of $(3x + 2)(2x + 1)$
		M1	for method of multiplying out remaining products, half of which are correct (ft their first product)	First product must be quadratic but need not be simplified or may be simplified incorrectly
		A1	cao	

(Q15 1MA1/2H, Nov 2019)

Q6.

Question	Working	Answer	Mark	Notes
		$x^3 + 6x^2 + 11x + 6$	M1	for method to find the product of any two linear expressions (3 correct terms) e.g. $x^2 + x + 2x + 2$ or $x^2 + 2x + 3x + 6$ or $x^2 + x + 3x + 3$
			M1	for method of multiplying out remaining products, half of which are correct (ft their first product) e.g. $x^3 + x^2 + 2x^2 + 3x^2 + 2x + 3x + 6x + 6$
			A1	cao

(Q10 1MA1/1H, June 2017)

Q7.

Question	Working	Answer	Mark	Notes
		No with explanation	2	C1 for expansion of $(x + 5)^2$ with at least 3 terms correct or substitution of the same number into both expressions C1 No with $(x + 5)^2 = x^2 + 10x + 25$ or No with correct evaluation of both expressions

(Q19 1MA1/3F/M1, Specimen papers)

Q8.

Question	Answer	Mark	Mark scheme	Additional guidance
	$x^3 + 8x^2 + x - 42$	M1	for a method to find the product of two linear expression (3 out of 4 terms correct or 4 correct terms ignoring signs), eg $x^2 - 2x + 7x - 14$ or $x^2 + 3x - 2x - 6$ or $x^2 + 3x + 7x + 21$	Note that (eg) $5x - 14$ in expansion of $(x + 7)(x - 2)$ is to be regarded as 3 correct terms.
		M1	for a complete method to obtain all terms, half of which are correct (ft their first product), eg $x^3 + 3x^2 - 2x^2 + 7x^2 - 6x + 21x - 14x - 42$	First product must be quadratic with at least 3 terms but need not be simplified or may be simplified incorrectly
		A1	cao	

(Q09 1MA1/2H, Nov 2023)

Q9.

Question	Working	Answer	Mark	Notes
		$x^3 + 6x^2 - 24x - 64$	M1	for a method to find the product of any two linear expressions, e.g. 3 correct terms or 4 correct terms ignoring signs, e.g. $(x + 2)(x + 8) = x^2 + 10x + 16$, or $(x + 8)(x - 4) = x^2 + 4x - 32$, or $(x + 2)(x - 4) = x^2 - 2x - 8$
			M1	for a method of 6 products, 4 of which are correct (ft from their first product) or a method of 8 products 6 of which are correct
			A1	cao

(Q11 1MA1/3H/M3, Specimen papers)

Q10.

Paper 1MA1: 2H			
Question	Working	Answer	Notes
		Fully correct algebra to show given result	M1 for method to find the product of any two linear expressions; eg. 3 correct terms or 4 terms ignoring signs
			M1 for method of 6 products, 4 of which are correct (ft their first product)
			A1 for fully accurate working to give the required result

(Q13 1MA1/2H/S1, Specimen papers)

Q11.

Question	Answer	Mark	Mark scheme	Additional guidance
	Shown	M1	for a method to find the product of two linear expressions (3 out of 4 terms correct or 4 correct terms ignoring signs) eg $x^2 + 3x - x - 3$ or $x^2 + 3x - 5x - 15$ or $x^2 - 5x - x + 5$	Note that (eg) $2x - 3$ in expansion of $(x - 1)(x + 3)$ is to be regarded as 3 correct terms.
M1		for a complete method to obtain all terms, half of which are correct (ft their first product) eg $x^3 - 5x^2 - 10x + 2x^2 - 3x + 15$	First product must be quadratic with at least 3 terms but need not be simplified or may be simplified incorrectly	
A1		for $x^3 - 3x^2 - 13x + 15$ shown, accept $x^3 + -3x^2 + -13x + 15$		

(Q12 1MA1/3H, June 2023)

Q12.

Question	Working	Answer	Mark	Notes
(a)		Evaluation	C1	for error correctly identified, can be in the working, e.g. circling
(b)		Assessment	C1	for statement that Josh should be looking for two values that add to -6 (not 6)
(c)		Evaluation	C1	for indication that the y intercept should be negative not positive

(Q05 1MA1/3H/M3, Specimen papers)

Q13.

Question	Answer	Mark	Mark scheme	Additional guidance
	$6x^3 - 23x^2 - 38x + 15$	M1	for method to find the product of any two linear expressions (3 out of 4 terms correct or 4 correct terms ignoring signs) eg $6x^2 + 9x - 2x - 3$ or $3x^2 - 15x - x + 5$ or $2x^2 - 10x + 3x - 15$	Note that, for example, $7x - 3$ in expansion of $(3x - 1)(2x + 3)$ is regarded as 3 correct terms Do not award this mark for eg $6x^2 + 9x - 2x - 3 + 3x^2 - 15x - x + 5$
M1		for a complete method to obtain all terms, half of which are correct (ft their first product) eg $6x^3 + 7x^2 - 30x^2 - 35x - 3x + 15$ or $6x^3 + 9x^2 - 32x^2 - 48x + 10x + 15$ or $6x^3 - 2x^2 - 21x^2 - 45x + 7x + 15$	First product must be quadratic with at least 3 terms but need not be simplified or may be simplified incorrectly	
A1		cao		

(Q14 1MA1/1H, June 2024)