

TAKE 10 ... EXPANSION OF BRACKET

Q1.

Question	Working	Answer	Mark	Notes
(a)		$12x + 20$	1	B1 cao
(b)		$5x + 7$	2	M1 for $2 \times x - 2 \times 4$ or $3 \times x + 3 \times 5$ A1 cao
(c)		$x^2 + 10x + 24$	2	B2 cao (B1 for 4 correct terms with or without signs, or 3 out of no more than 4 terms, with correct signs. The terms may be in an expression or in a table)

Q2.

	Working	Answer	Mark	Notes
(a)		$6 + 3t$	1	B1 for $6 + 3t$
(b)		$6x^2 + 15x$	2	B2 for $6x^2 + 15x$ (B1 for $6x^2$ or $15x$)
(c)	$m^2 + 10m + 3m + 30$	$m^2 + 13m + 30$	2	M1 for all 4 terms (and no additional terms) correct with or without signs or 3 out of no more than four terms correct with signs A1 for $m^2 + 13m + 30$

Q3.

Question	Working	Answer	Mark	Notes
(a)		$3y + 7x + 3$	1	B1 cao
(b)		$2x(x - 2)$	2	B2 for $2x(x - 2)$. Accept $2x(x + -2)$. (B1 for $x(2x - 4)$ or $2(x^2 - 2x)$ or $2x(\text{linear expression in } x)$ or $(x - 2)(\text{linear expression in } x)$)
(c)	$11 - 3x - 6$	$5 - 3x$	2	M1 for expansion of $-3(x + 2)$ A1 cao
(d)	$3x^2 + 7x - 18x - 42$	$3x^2 - 11x - 42$	2	M1 for 4 terms correct with or without signs or 3 out of exactly 4 terms correct (the terms may be in an expression or table) OR $x(3x + 7) - 6(3x + 7)$ or $3x(x - 6) + 7(x - 6)$ A1 cao

Q4.

PAPER: IMA0/2H				
Question	Working	Answer	Mark	Notes
(a)		$y^2 + 7y + 10$	2	M1 for all 4 terms (and no additional terms) correct ignoring signs or 3 terms correct A1 for $y^2 + 7y + 10$
(b)		$(e - 3)(e + 4)$	2	M1 for $(e \pm 3)(e \pm 4)$ A1 for $(e - 3)(e + 4)$

Q5.

PAPER: IMA0_2H				
Question	Working	Answer	Mark	Notes
(a)	$y^2 - 2y - 5y + 10$	$y^2 - 7y + 10$	2	M1 for all 4 terms correct (condone incorrect signs) or 3 out of 4 terms correct with correct signs A1 cao
* (b)	$(4n^2 + 2n + 2n + 1)$ $- (2n + 1)$ $= 4n^2 + 4n + 1 - 2n - 1$ $= 4n^2 + 2n$ $= 2n(2n + 1)$	Proof	3	M1 for 3 out of 4 terms correct in the expansion of $(2n + 1)^2$ or $(2n + 1)\{(2n + 1) - 1\}$ A1 for $4n^2 + 2n$ or equivalent expression in factorised form C1 for convincing statement using $2n(2n + 1)$ or $2(2n^2 + n)$ or $4n^2 + 2n$ to prove the result

Q6.

PAPER: 5MB2H 01				
Question	Working	Answer	Mark	Notes
(a)		$e + 7f$	2	B2 for $e + 7f$ (B1 for e or $7f$)
(b)		$10c + 15d$	1	B1 cao
(c)		$2x - 7$	4	M1 for $x + x + 3 + 2x (= 4x + 3)$ M1 for $2(3x - 2) (= 6x - 4)$ M1 for ' $6x^2 - 4x^2 - 4^2 \pm 3$ ' oe A1 cao OR M1 for $2(3x - 2) (= 6x - 4)$ M1 for ' $6x^2 - x - x - 2x (= 2x)$ ' oe M1 for ' $-4^2 \pm 3$ ' A1 cao

Q7.

5MB2H 01 November 2015				
Question	Working	Answer	Mark	Notes
		$A = 9x^2 + 19x - 6$	4	B1 for one of $5x - 2$ or x found M1 for correct method to find area of one relevant rectangle. M1 for complete method to find whole area or simplified expression $9x^2 + 19x - 6$ or correct but not simplified formula A1 for correct, simplified formula $A = 9x^2 + 19x - 6$

Q8.

PAPER: 1MA0 2H				
Question	Working	Answer	Mark	Notes
		Shown	3	M1 for correct expansion of $(n + 3)^2$ or $(n - 3)^2$ eg $(n + 3)^2 = n^2 + 6n + 9$ or $(n - 3)^2 = n^2 - 6n + 9$ M1 for correct expansion of complete expression, eg $(n^2 + 6n + 9) - (n^2 - 6n + 9)$ A1 for $12n$ and conclusion OR M1 for $[n + 3 + n - 3][n + 3 - (n - 3)]$ M1 for $2n \times 6$ A1 for conclusion

Q9.

PAPER: 1MA0/1H				
Question	Working	Answer	Mark	Notes
		$9x^2 + 7x - 2$	4	M1 for finding an expression for a missing length eg $4x - 1 - x - x (=2x - 1)$ or $x + 2 - 2x (=2 - x)$ M1 for a correct expression for one area from the cross-section, eg $x \times 2x$ or $(4x - 1)(x + 2 - 2x)$ or for one volume of cuboid(s), eg $x \times 2x \times (x + 1)$ M1 for a complete method to find the volume A1 for $9x^2 + 7x - 2$ or $(9x - 2)(x + 1)$ oe

Q10.

Question	Answer	Mark	Mark scheme	Additional guidance
	Statement supported by algebra	B1	writing a general expression for an odd number eg $2n+1$	Could be $2n - 1$, $2n + 3$, etc
		M1	(dep) for expanding ("odd number") ² with at least 3 out of 4 correct terms	Note that $4n^2 + 4n + 2$ or $2n^2 + 4n + 1$ in expansion of $(2n + 1)^2$ is to be regarded as 3 correct terms
		A1	for correct simplified expansion, eg $4n^2 + 4n + 1$	
		C1	(dep A1) for a concluding statement eg $4(n^2 + n) + 1$ (is one more than a multiple of 4)	