Mark scheme

Expressions, brackets and simplifying

Mathematics 0580 · Questions from Paper 1, Paper 2, Paper 3 and Pape…

Total marks

28

MARKS FOR EACH QUESTION

1	2	3	4	5	6	7	8	9	10	Total
2	2	2	2	3	4	3	4	3	3	**28**

Question 1 **[2]**

1(a)	$18t$ final answer	**1**	
1(b)	$n + 16$ final answer	**1**	

Question 2 **[2]**

2	66	**2**	**B1** for 84 or −18 seen

Question 3 **[2]**

3	$21y + xy$ or $y(21 + x)$ final answer	**2**	**B1** for $14x + 21y$ or $-14x + xy$ or answer of $ky + xy$

Question 4 **[2]**

4	$x^2 - 11x + 28$ final answer	**2**	**B1** for $x^2 - 4x - 7x + 28$ with at least 3 terms correct

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Question 5 **[3]**

5	$8x-10$ or $2(4x-5)$ final answer	**3**	**B2** for $8x-10$ seen and spoilt or **M2** for $2(x+7)+2(3x-12)$ oe or **M1** for $x+7+3x-12$ oe or **B1** for $8x$ or -10 in final answer

Question 6 **[4]**

6(a)	160	**2**	**M1** for $3(5\times12-8)+4$ oe or better
6(b)	90.25	**2**	**M1** for $369-8=4t$ oe or better or $\frac{369}{4}=t+\frac{8}{4}$ oe or better or $\frac{W-8}{4}$ [$=t$] oe or better

Question 7 **[3]**

7	$3x^2-3x+2$ final answer	**3**	**B2** for $x^2+2x+x+2+2x^2-6x$ oe or **B1** for 3 correct terms of $x^2+2x+x+2$ oe

Question 8 **[4]**

8(a)	$19x-6$ final answer	**2**	**B1** for $7x+14$ or $12x-20$ or for $19x-6$ seen then spoilt
8(b)	$15x^2+xy-2y^2$ final answer	**2**	**B1** for $15x^2+6xy-5xy-2y^2$ with at least three terms correct

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Question 9 **[3]**

9	$2x^3 + 7x^2 - 7x - 30$ final answer	**3**	**B2** for unsimplified expansion with at most one error or for simplified four-term expression of correct form with three terms correct or **B1** for correct expansion of two brackets with at least three terms out of four correct

Question 10 **[3]**

10	$[a =] -3$ $[b =] 1$ $[c =] -15$	**3**	**B1** for $a = -3$ **B1FT** for $b = 7 + 2 \times$ *their a* **B1FT** for $c = 6 + 7 \times$ *their a* If B0 scored **B1** for correct expansion of a pair of brackets or of three brackets $\left(x^2 + ax + 2x + 2a\right)\left[2x + 3\right]$ or $\left[x + a\right]\left(2x^2 + 4x + 3x + 6\right)$ or $2x^3 + \left(2a + 7\right)x^2 + \left(7a + 6\right)x + 6a$ oe or for $b = 7 + 2a$ or for $c = 6 + 7a$

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