Paper: 1MA1/1H				
Question	**Working**	**Answer**	**Mark**	**Notes**
10 **Q1**		$x^3+6x^2+11x+6$	M1 M1 A1	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 $x^2+x+3x+3$ for method of multiplying out remaining products, half of which are correct (ft their first product) e.g. $x^3+x^2+2x^2+3x^2+2x+3x+6x+6$ cao

Paper: 1MA1/1H				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
15 (a)	$(a - b)(a + b)$	B1	cao	Accept reversed brackets
(b)	$12(x^2 + 1)$	M1	for using 'a' = $x^2 + 4$ and 'b' = $x^2 - 2$ **OR** multiplying out both brackets, at least one fully correct	Correct 4 terms if not simplified or 3 terms if simplified
Q2		M1	(dep) for a correct expression for ('a' + 'b')('a' – 'b') with no additional brackets, simplified or unsimplified eg $(x^2 + 4 + x^2 - 2)(x^2 + 4 - x^2 + 2)$ **or** $(2x^2 + 2) \times 6$ **OR** ft for a correct expression without brackets, simplified or unsimplified eg $x^4 + 8x^2 + 16 - x^4 + 4x^2 - 4$	
		A1	for $12(x^2 + 1)$ **or** $12x^2 + 12$ oe	

Paper: 1MA1/3H				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
2 **Q3**	$9p + 13$	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.

Paper: 1MA1/1H				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
14 **Q4**	Shown	M1	for a start to the method, eg finds one correct area $4(x + 1)$ **or** $(x + 7)(2x + 6)$ **or** $(x + 1)(x + 11)$ **or** $(x + 7)(x + 5)$ **or** $4(x + 5)$ **or** $(x + 11)(2x + 6)$	
		M1	for a complete expression for the total area, eg $4(x + 1) + (x + 7)(2x + 6)$ **or** $4x + 4 + 2x^2 + 14x + 6x + 42$ **OR** $(x + 1)(x + 11) + (x + 7)(x + 5)$ **or** $x^2 + x + 11x + 11 + x^2 + 7x + 5x + 35$ **OR** $(x + 11)(2x + 6) - 4(x + 5)$ **or** $2x^2 + 22x + 6x + 66 - 4x - 20$	
		A1	for a complete chain of reasoning with fully correct algebra leading to $2x^2 + 24x + 46$	$2x^2 + 24x + 46$ is given so need to see brackets expanded correctly

Paper: 1MA1/2H				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
12 **Q5**	$6x^3 + x^2 - 20x - 12$	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.

Paper: 1MA1/2H				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
15 **Q6**	$6x^3 - 23x^2 - 33x - 10$	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) for method of multiplying out remaining products, half of which are correct (ft their first product) cao	Note that, for example, $6x^2 + 7x$ or $7x + 2$ are regarded as three terms in the expansion of $(3x + 2)(2x + 1)$ First product must be quadratic but need not be simplified or may be simplified incorrectly

Paper: 1MA1/3H				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
1 (a)	$x^2 - 4x - 45$	M1	for 3 of 4 terms correct **or** 4 terms correct ignoring signs	3 terms correct can be implied, eg $x^2 - 4x + c$
		A1	cao	
Q7 (b)	$3x(3x + 2)$	B2	for $3x(3x + 2)$	
		(B1	for $3(3x^2 + 2x)$ **or** $x(9x + 6)$ **or** $3x(ax + b)$ where a and b are integers **or** $(3x + 2)$ as a factor)	

Paper: 1MA1/3H				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
10 **Q8**	Explanation	C1	for full explanation indicating the problem with the negative signs **Acceptable examples** He should have $+2x + 4$ on the second line He should have done $- -4$ and $- -2x$ $3x - -2x = 5x$, not $1x$ Two minuses make a plus which he didn't account for **Not acceptable examples** He has not expanded the brackets Peter has to factorise first He did not collect the terms He didn't include the x^2	

Paper: 1MA1/2H				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
1 (a)	x^{15}	B1	cao	
(b)	$40 - 10x$	M1	for method to expand one bracket, or collect like terms eg $4 \times x + 4 \times 3$ $(= 4x + 12)$ **or** $7 \times 4 - 7 \times 2x$ $(= 28 - 14x)$ **or** $4 \times x - 7 \times 2x$ $(= 4x - 14x)$ **and** $4 \times 3 + 7 \times 4$ $(= 12 + 28)$	
Q9		A1	oe	
(c)	$3x^2(5x + y)$	M1	for $3(5x^3 + x^2y)$ **or** $x(15x^2+3xy)$ **or** $3x(5x^2 + xy)$ **or** $x^2(15x + 3y)$ **or** $3x^2(ax + by)$	Where $a \geq 1$ and $b \geq 1$
		A1	cao	

Paper: 1MA1/3H				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
14 (a)	$4(p-3)(p+3)$	M1	for $4(p^2-9)$ or partial factorisation which includes the product of 2 linear factors eg. $(4p-12)(p+3)$ or $(p-3)(4p+12)$ or $(2p-6)(2p+6)$ or $2(2p-6)(p+3)$ or $2(2p+6)(p-3)$ or $2(p-3)2(p+3)$	
		A1	for $4(p-3)(p+3)$	
(b)	$6m^3+11m^2-57m-20$	M1	for a method to find the product of two linear expressions, 3 correct terms out of 4 terms, eg. $6m^2+2m-15m-5=6m^2-13m-5$ or $2m^2+8m-5m-20=2m^2+3m-20$ or $3m^2+12m+m+4=3m^2+13m+4$	Note that, for example, $3m-20$ is regarded as three terms in the expansion of $(m+4)(2m-5)$
Q10		M1	for a complete method to obtain all terms, at least half of which are correct (ft their first product), eg. $6m^3+2m^2-15m^2+24m^2+8m-60m-5m-20$	First product must be a 3 or 4 term quadratic but need not be simplified or may be incorrect.
		A1	for $6m^3+11m^2-57m-20$	Accept $a=6$, $b=11$, $c=-57$, $d=-20$

Paper: 1MA1/1H				
Question	**Working**	**Answer**	**Mark**	**Notes**
4 **Q11**		$x^2 + 6x = 1$	M1 M1 A1	writes the area using algebraic terms e.g. $(x + 3) \times (x + 3)$ or at least two correct area expressions which may be written on the diagram or x given as $\sqrt{10} - 3$ expands and includes the given 10 e.g. $x^2 + 3x + 3x + 9 = 10$; condone one error in the four terms when expanding or $10 - 3\sqrt{10} - 3\sqrt{10} + 9 + 6\sqrt{10} - 18$ (=1) condone 1 error in the 6 terms rearranges to give the given equation or shows surd expression simplifies to 1