18 (a)	$(x + 2)(2x + 3) = 2x^2 + 3x + 4x + 6$ $(2x + 3)(x – 7) = 2x^2 – 14x + 3x – 21$ $(x + 2)(x – 7) = x^2 – 7x + 2x – 14$		3	M1	For multiplying a pair of brackets and getting 3 out of 4 terms correct.
	$(2x^2+7x+6)(x–7) = 2x^3–14x^2+7x^2–49x+6x–42$ $(2x^2–11x–21)(x+2) = 2x^3+4x^2–11x^2–22x–21x–42$ $(x^2–5x–14)(2x+3) = 2x^3+3x^2–10x^2–15x–28x–42$			M1dep	For multiplying the product of the first 2 brackets (ft from the 1st stage) by the 3rd bracket, and getting at least 3 out of 6 or 4 out of 8 terms correct
		$2x^3 – 7x^2 – 43x – 42$		A1	Fully correct. isw extra work as long as correct e.g. $x(2x^2 – 7x – 43) – 42$
	Alternative (all in one method)				
	$(x + 2)(2x + 3)(x – 7) =$ $2x^3 – 14x^2 + 3x^2 – 21x + 4x^2 – 28x + 6x – 42$			M2 (M1)	For at least 6 out of 8 correct terms for 4 or 5 out of 8 correct terms
		$2x^3 – 7x^2 – 43x – 42$		A1	
(b)	$p^2(2m – y) = x + m$ $2p^2m – p^2y = x + m$		3	M1	Multiplying by denominator **and** expanding bracket
	e.g. $2p^2m – m = x + p^2y$ $m(2p^2 – 1) = x + p^2y$			M1	Collect terms in m **and** factorise in a correct equation
		$m = \frac{x + p^2y}{2p^2 – 1}$		A1	oe eg $m = \frac{–x – p^2y}{1 – 2p^2}$ must have $m =$

				Total 6 marks

19	$a + 24d = 44.5$		5	M1	oe
	$\frac{30}{2}(2a+(30-1)d) = 765$ oe, eg (15(2a + 29d) = 765), (2a + 29d = 51), etc			M1	oe (may be simplified)
	e.g. 2(44.5 – 24d) + 29d = 51 oe or _2a + 48d = 89 2a + 29d = 51 oe			M1	dep on M2, a complete method to eliminate one variable, allow one arithmetic error
		26.5		A2 (A1)	dep on M2, oe dep on M2. If not A2, award A1 for $a = -3.5$ **or** $d = 2$
					Total 5 marks

20	125 **or** 10^{21n}		3	M1
	125×10^{21n}			M1
		$1.25 \times 10^{21n+2}$		A1
				Total 3 marks