CHAPTER 4

Ex A

1) $x(3 + y)$ 2) $2x(2x – y)$ 3) $pq(q – p)$ 4) $3q(p – 3q)$ 5) $2x^2(x - 3)$

6) $4a^3b^2(2a^2 – 3b^2)$ 7) $(y – 1)(5y + 3)$

Ex B

1) $(x – 3)(x + 2)$ 2) $(x + 8)(x – 2)$ 3) $(2x + 1)(x + 2)$ 4) $x(2x – 3)$

5) $(3x -1)(x + 2)$ 6) $(2y + 3)(y + 7)$ 7) $(7y – 3)(y – 1)$

8) $5(2x – 3)(x + 2)$ 9) $(2x + 5)(2x – 5)$ 10) $(x – 3)(x – y)$

11) $4(x – 2)(x – 1)$ 12) $(4m – 9n)(4m + 9n)$ 13) $y(2y – 3a)(2y + 3a)$

14) $2(4x – 1)(x + 2)$

Challenge questions

Question 1

$3(x-2)(a+4c)$

Question 2

$\frac{a+c+3}{2b}$

Question 3

$\frac{x-2}{x-1}$

Question 4

29×23

29 and 23 identified	B2	B1	$(n+9)(n+3)$ or 667 or 29 or 23

Question 5

$(x-3)(x+3)(5x+3)(x-1)$

Question 6

$a = 3, b = 2, c = -5$

(b)		$\frac{3x}{2x-5}$	M1	factorise $2x^2+x-15$ [$=(2x-5)(x+3)$] or $3x^2+9x$ [$=3x(x+3)$]
			M1	$\frac{1}{(2x-5)(x+3)} \times \frac{3x(x+3)}{1}$
			A1	cao

Question 7

$12(x^2+1)$

$12(x^2 + 1)$	M1	for using 'a' = $x^2 + 4$ and 'b' = $x^2 - 2$ **OR** multiplying out both brackets, at least one fully correct
	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

Question 8

18 year-old