

<b>1</b>	(a)		$3w$	1	B1
	(b)		$8a$	1	B1
	(c)		$f^5$	1	B1
	(d)		$9c - 2h$	2	B2 (B1 for one correct term)
	(e)		$5(2d + 3)$	1	B1
	(f)	$e - g = 7t$ or $\frac{e}{7} = t + \frac{g}{7}$ oe		2	M1
			$t = \frac{e-g}{7}$		A1 oe e.g. $(e-g) \div 7$
<b>Total 8 marks</b>					

<b>2</b>	(a)		$5cd$	1	B1
----------	-----	--	-------	---	----

	(d)		$6k + 11m$	2	B2 If not B2 then award B1 for $6k$ or $11m$
--	-----	--	------------	---	--

<b>3</b>	a		$g^{10}$	1	B1
	b		$9c^2d^8$	2	B2 B1 for 2 out of 3 terms correct as part of a product

<b>4</b>	a		$15rt$	1	B1 oe
----------	---	--	--------	---	-------

<b>5</b>	d	$\frac{n^{11}}{n^5}$ OR $n^{-1} \times n^7$ OR $n^4 \times n^2$ OR $n^4 \times n^7 \times n^{-5}$ OR $n^{''11''} \div n^5 = n^{(''11''-5)}$			M1 for simplifying two terms
			$n^6$	2	A1

<b>6</b>	(c)		$64p^3q^6$	2	B2 B1 for 2 correct parts of the product
----------	-----	--	------------	---	--

<b>7</b>	(a)		$11m - 3k$	2	B2 If not B2 then award B1 for either $11m$ or $-3k$
----------	-----	--	------------	---	--

<b>8</b>	(a)		$10ab$	1	B1
----------	-----	--	--------	---	----

<b>9</b>	(a)		$30d$	1	B1 Allow $d30$ but not $30 \times d$
	(b)		$4e$	1	B1 cao

<b>10</b>	(a)		$w^5$	1	B1
	(b)		$15ac$	1	B1 or $a15c$ or $ac15$ or $c15a$ oe (NB: no multiplication signs)
	(c)		$2e + 7f$	2	B2 (B1 for $2e$ or $+7f$ or $7f$ but not for $-7f$ )  Do not isw so if you see $2e + 7f = 9ef$ award B1 only
	(d)	eg $5x - x = 12 + 7$ or $-7 - 12 = x - 5x$  or $4x - 7 = 12$ or $5x = x + 19$ oe		3	M1 for rearrangement with $x$ terms on one side and numerical terms on the other in a correct equation or the correct simplification of $x$ terms or numbers on one side in a correct equation
		$4x = 19$ or $-4x = -19$			M1 $x$ terms simplified and number terms simplified correctly in an equation
		<i>Working required</i>	$4.75$		A1 oe, eg $\frac{19}{4}$ or $4\frac{3}{4}$ dep on M1
	<b>Total 7 marks</b>				

<b>11</b>	a		$a^4$	1	B1
	b		$20bc$	1	B1
	c		$7d - 3e$	2	B2 (B1 for $7d$ or $-3e$ or $7d + -3e$ )
<b>Total 4 marks</b>					

12	(a)		$81k^8$	2	B2	B1 for 81 or $k^8$ seen in their final answer.
	(b)		$7m^4n^6$	2	B2	B1 for $7m^4$ or $n^6$ in a product with no other terms in $m$ or $n$
Total 4 marks						

13	(a)		$13x - 2y$	2	B2	accept $-2y + 13x$ (B1 for $13x$ or $-2y$ )
----	-----	--	------------	---	----	--

14	(a)		$16x^{12}y^{20}$	2	B2	B1 for an answer in the form $ax^ny^m$ with 2 correct from $a = 16, n = 12, m = 20$
----	-----	--	------------------	---	----	---

15	(a)		$7p - t$	2	B2	Fully correct answer (allow $-1t$ ) (B1 for $7p$ or $-t$ )
----	-----	--	----------	---	----	---

16	(a)		$a^5$	1	B1	
	(b)		$24bc$	1	B1	oe

17	(a)		$8a$	1	B1	cao
	(b)		$24b$	1	B1	cao
	(c)		$27$	1	B1	cao
Total 3 marks						

18	(a)		$7g - 2e$	2	B2	or $-2e + 7g$ If not B2 then award B1 for $7g$ or $-2e$
----	-----	--	-----------	---	----	---

19	(a)		$c^6$	1	B1	
	(b)		$6h^3$	1	B1	
	(c)		$x^2 + 5x$	1	B1	
	(d)		$3(3y - 4)$	1	B1	
	(e)		$T = 15m + 40p$	3	B3	((B2 for $15m + 40p$ or $T = 15m + xp$ or $T = ym + 40p$ or $T = 40m + 15p$ ) (B1 for $15m + xp$ or $ym + 40p$ or $40m + 15p$ or for $T =$ an incorrect expression in $m$ and $p$ eg $T = mp$ ) Allow $15 \times m$ or $m15$ etc
Total 7 marks						

20	(a)		$2c + 7d$	2	B2	(B1 for $2c$ or $7d$ )
	(b)		$40ef$	1	B1	
	(c)	$5r = 8 + 3$ or $5r = 11$ or $-3 - 8 = -5r$ or $-11 = -5r$ or $r - \frac{3}{5} = \frac{8}{5}$ or $(8 + 3) \div 5$		2	M1	for a correct first step or for a calculation for $r$
			$2.2$		A1	oe
Total 5 marks						

21	(a)		$9y$	1	B1	
----	-----	--	------	---	----	--

	(b)		$12p^2$	1	B1	
--	-----	--	---------	---	----	--

	(e)		$6c + 2d$	2	B2	for $6c + 2d$ or $2d + 6c$ (B1 for $6c$ or $2d$ )
--	-----	--	-----------	---	----	--

22	(a)		$w^9$	1	B1	
	(b)		$10m^7p^3$	2	B2	(B1 for 2 terms correct as part of a product)
Total 3 marks						

23	(a)		$45pk$	1	B1	accept $45kp$
	(b)		$11e - 5f$	2	B2	for $11e - 5f$ (B1 for $11e$ or $-5f$ )

24	(a)		$c^5$	1	B1	
----	-----	--	-------	---	----	--

25	(b)		$27a^6b^{12}$	2	B2	(B1 for 2 of 3 parts in a product)
----	-----	--	---------------	---	----	------------------------------------

<b>26</b>	(a)		$12ac$	1	B1
	(b)		$5d - 2e$	2	B2 for $5d - 2e$ oe (B1 for $5d$ or $-2e$ )
	(c)	$4x = 23 + 7$ <b>or</b> $4x = 30$ <b>oe or</b> $x - \frac{7}{4} = \frac{23}{4}$ <b>or</b> $(23 + 7) \div 4$ <b>or</b> $30 \div 4$		2	M1 for a correct first step <b>or</b> a correct calculation for $x$
		<i>Correct answer scores full marks (unless from obvious incorrect working)</i>	7.5		A1 oe eg $\frac{15}{2}$ , $7\frac{1}{2}$ , $\frac{30}{4}$
					<b>Total 5 marks</b>

<b>27</b>	(a)		$4p$	1	B1
	(b)		$12e + 4f$	2	B2 B1 for $12e$ or $4f$