Algebra review Answers

1)		[b =] $5(a + 9)$ oe final answer	**2**	**M1** for one correct step

2)	**(a)**	$5x + 15$ final answer	**1**		
	(b)	$3x(4y - x)$ final answer	**2**	**B1** for $3(4xy - x^2)$ **or** $x(12y - 3x)$	
	(c)	15	**2**	**M1** for a correct first step	

3)	14.5 oe	**3**	**M2** for complete correct method or **M1** for one correct step	

4)	[v =] $\sqrt{\frac{2E}{m}}$ or $\sqrt{\frac{E}{0.5m}}$ or $\sqrt{\frac{E}{\frac{1}{2}m}}$	**3**	**M2** for $v^2 = \frac{2E}{m}$ **or M1** for $mv^2 = 2E$ or ½ $v^2 = \frac{E}{m}$	

5)	[x =] 7	**2**	**M1** for correct first step $3x = 16 + 5$ or $x - \frac{5}{3} = \frac{16}{3}$	

6)	$2y(3xy - 4)$	**2**	**B1** for $2(3xy^2 - 4y)$ or $y(6xy - 8)$	

7)	$3x(4y - x)$ final answer	**2**	**B1** for $3(4xy - x^2)$ or $x(12y - 3x)$	

8)	**(a)**	$(x + 6)(x - 5)$	**2**	**SC1** for $(x + a)(x + b)$ where $ab = -30$ or $a + b$	

9)	$(p + 3)(k + m)$	**2**	**B1** for $k(p + 3) + m(p + 3)$ or $p(k + m) + 3(k + m)$	

10)	25	**4**	**M1** for correct method to eliminate one variable **A1** for $x = 11$ **A1** for $y = 3$ **B1 FT** for 2 × *their* x + *their* y correctly evaluated	

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11)	8 – 3		3	**M1** for correct method to eliminate one variable. **A1** for x or y correct.
12)	**(a) (i)** 2.5 or $\frac{5}{2}$		**2**	**M1** for one correct step collected i.e $6x = k$ or $ax = 15$ or for $4x + 2x = 8 + 7$
	(ii) 13		**2**	**M1** for $x - 7 = 2 \times 3$ or better
13)	$3y - y^4$ final answer		**2**	**B1** for $3y$ or $-y^4$ as part of two term expression
14)	**(a) (i)**	$4m$	**1**	
	(ii)	$2e - 10f$	**2**	B1 for $ae - 10$f or $2e \pm bf$ $(a,b \neq 0)$
	(b) (i)	–3	**2**	M1 for $27 + (-2) \times 15$ or better
	(ii)	$[t=] \frac{s-u}{a}$ or $\frac{s}{a} - \frac{u}{a}$	**2**	M1 first step correct SC1 for s – u ÷ a www
	(c)	$[x =] 2$, $[y =] -3$	**3**	M1 for correct method to eliminate one variable. A1 for x or y correct
15)	**(a)**	**(i)** 2.5 or 5/2 or 2 ½	**2**	**M1** $6x - 2x = 8 + 2$ or better
		(ii) 4.5 or 9/2 or 4 ½	**3**	**M1** $8y - 12$ or $2y - 3 = 6$ **M1** $8y = 36$ ft or $2y = 9$ ft *their* first step
	(b)	$(x =) 3$, $(y =) -4$	**4**	**M1** coefficient of x or y the same **dep M1** for addition or subtraction **A1** for 1 correct answer (their first answer)