Question			Answer	Marks	Part Marks and Guidance	
1	(a)		0.59	2	**B1** for other rot versions of 0.58618...	
	(b)		$3 \times (6 + 5) - 1 = 32$	1	condone extra superfluous pairs of brackets	Attach image of page 16 to this part or to 4(b)

2	(a)		$\frac{2y}{3}$	2	**B1** for $\frac{4y}{6}$ **or** $\frac{2xy}{3x}$ **or** 0.66[6…]y seen	
	(b)		$18x - 11$	3	**B1** for $6x - 3$ **And B1** for $12x - 8$ After B0 **SC1** for $18x$ in answer	

3	(a)	$(6 + 2) \times 4 = 32$	**1**		
	(b)	$6 + 2 \times (4 - 1) = 12$	**1**	Accept superfluous pairs of brackets in all 3 parts eg accept $6 + (2 \times (4 - 1)) = 12$ here	Brackets must be in pairs **0** for e.g. $6 + 2 \times (4 - 1 = 12$
	(c)	$6 + (2 \times 4)^2 = 70$	**1**		

4	**(a)** ♠	**(i)**	6.75 or 6.7 or 6.8	**1**		
		(ii)	614.125	**1**	Condone rot to 3sf or more	
	(b)		2 + 3 × (2 + 7) = 29	**1**		ignore superfluous pairs of extra brackets eg 2 + (3 × (2 + 7)) = 29 but 0 for extra single brackets or for extra brackets giving wrong result eg (2 + 3) × (2 + 7) = 29
	(c)		231	**2**	**M1** for 3.85 × 60 or for 0.85 minutes = 51s soi	

5	**(a)**		1.57	2	**M1** for other versions of 1.568... rot to 1 dp or more Or **SC1** for 0.85	
	(b)		12 – (1 + 4) × 3 = $^{-}$3	1		p16 is attached below the image for 2b; put BP on p16 to show looked at – if relevant working for another qn, use the chain link to attach it to that qn

6	**(a)**		288	1		
	(b)		$(9 + 3) \times (7 - 5) = 24$	1	Ignore superfluous pairs of brackets	
	(c)		72	3	nfww **M2** for $360 = 72 \times 5$ and $216 = 72 \times 3$ OR **M1** for an attempt at a factor tree or for division for 360 or 216, with at least three successive divisions by primes **M1** for correct factor tree or division for 360 ($= 2^3 \times 3^2 \times 5$) or 216 ($= 2^3 \times 3^3$)	May be from trials, trees or multiples

7	**(a)**	**(i)**	148.877	1	Condone rot to at least 4 sf	
		(ii)	5.4 as final answer	2	**B1** for 5.425 or 5.42 or 5.43 Or **SC1** for 7.5	
	(b)		0.4 or $\frac{2}{5}$ as final answer	1		
	(c)		$(7 \times 2 + 6)^2 = 400$ $(6 + 4) \times 2 - 5 = 15$	1 1	For each answer, ignore superfluous extra pairs of brackets	

8	**(a)**		Shouldn't multiply 7 by 2 oe Should be 14 + 2 oe Should be 12 ÷ 6 oe	1 1 1	Multiplied 7 by 2 (which is wrong) He did 14 – 2 (which is wrong) He did 6÷12 (which is wrong)	Any order. Any correct statement, no contradiction.
	(b)		Sub. ½ in correct LHS of equation and get 1	1		

9	(a)		0.019	2	**B1** for 0.0186... seen or rot to 2dp or more, except 0.019 **SC1** for 4.612	Allow **B1** for 0.02, whether from rounding calculated answer or from estimate
	(b)		2 × (2 + 6) × 4 = 64 (2 × 2 + 6) × 4 = 40	1 1	Allow superfluous pairs of brackets in one or both answers	

10	**(a)**		33.6, $\frac{168}{5}$ or $33\frac{3}{5}$	2	**B1** for other answers rounding to 33.6 or for both 282.24 and 8.4 seen oe as fractions	**B0** for correct answer seen then spoilt since obtainable from 3.6 × 2 + 13.2 ×
	(b)		$4 + (5 \times 6)^2$	1	Condone extra pairs of superfluous brackets	
	(c)	**(i)**	$2^3 \times 3 \times 5$	2	Product required but indices need not be used **M1** for 2, 3, 5 and no others or for factor tree or division with at least two of 2, 3 and 5 found as factors	
		(ii)	840		**M2** for 120 × 7 or $2^3 \times 3 \times 5 \times 7$ oe or for correct Venn diagram or for lists of multiples of each of 120 and 42 where both lists go past 400 (condoning one error) Or **M1** for 42 = 2 × 3 × 7 oe (eg seen in Venn diagram or factor tree or division; product not required) or for lists of at least 4 multiples of each of 120 and 42 (condoning one error)	Lists may start with 120 and 42 or eg 240 and 84 or higher