Conversion - Percentages, Fractions & Decimals

Mark Scheme 3

Level	IGCSE
Subject	Maths (0580)
Exam Board	Cambridge International Examinations (CIE)
Paper Type	Extended
Topic	Number
Sub-Topic	Conversion - Percentages, Fractions & Decimals
Booklet	Mark Scheme 3

Time Allowed: 45 minutes

Score: /37

Percentage: /100

Grade Boundaries:

A*	A	B	C	D	E	U
>85%	75%	60%	45%	35%	25%	<25%

1	**(a)** 5.79×10^7 oe 5.21 39.5	**1** **1** **1**	Accept ans in range 57890000 to 57900000 5.207 39.50…. or 39.51 Accept answers to greater than 3sf
	(b) **(** 498.6... to 499	**2**	**M1** for $1.496 \times 10^8 \div 300\,000$
	(ii) 328 or 328.3...	**2**	**M1** for figs 197 or figs 328[3..] seen Or their 39.5 × their **(b)(i)**
	(c) 9.46[0] to 9.461×10^{12}	**3**	**B2** for any correct equivalent or **M1** for $300\,000 \times 3600 \times 24 \times 365$ oe or for answer figs 946 to 9461
	(d) 63200 or 63235 to 63242 oe	**2**	**M1** for figs (their **(c)** ÷ 1496). Implied by first 3 figs correct

2 **(a) (i)**	**250**	**B1**	
(ii)	their **(a)(i)** $\div 5 \times 52$ o.e. **2600** ft www2	**M1** **A1 ft**	**SC1** for $12.5 \div 5 \times 52$, implied by 130
(iii)	$\frac{\textit{their (a)(ii)} - 2450}{2450} \times 100$ o. **6.1**(22……..) ft www2	**M1** **A1ft**	$\frac{\textit{their (a)(ii)}}{2450} \times 100 - 100$, $\frac{2450}{100} = \frac{150}{x}$ ft M & A only if their **(a)(ii)** > 2450
(b) (i)	$20 \div 5 \times 3$ **12** www2	**M1** **A1**	Accept 12, 8 or 8, 12
(ii)	*their* ***(b)(i)*** $\div 3$ and (20 – *their* ***(b)(i)***) $\div 2.5$ **7 hours 12 mins** cao www2	**M1** **A1**	4 and 3.2 or 7.2 or 7h 20 mins seen imply **M1** Condone poor notation e.g. 7-12
(iii)	(2.777–2.778) o.e. cao o.e. in other uni	**B1**	o.e. must have units stated e. 0.7716..m/s, 46.29 – 46.30 m/min
(iv)	**07** o.e. ft	**B1 ft**	ft their **(b)(ii)** + 08 55 iff finishes on same day and **(b)(ii)** has hours **and** mins
(c)	$20 \times 100000 \div 80$ o.e. **25 000 or 2.5** $\times 10^4$ www2	**M1** **A1**	25 000 seen in final ans. After M0, **SC1** for figs 25 or 0.00004 final answer **[13]**

3**(a)(i)**	$\frac{60}{100} \times 120$		**M1**	Implied by 72 seen and not spoilt.
	($) 132	c.	**A1**	ww2
(ii)	$\frac{\text{their(a)(i)}}{120} \times 100$		**M1**	√ **f** $\frac{\text{their (a)(i)}}{120} \times 100$
	110(%) Final answer, but may be explained using 10.		**A1** √	**Sc1** for 10 **or** their extra % **or** $\frac{\text{their(a)(i)} - 120}{120} \times 100$
(b)	$\frac{159.10}{\text{their } 86}$ (x100)	o.	**M1**	Allow any statement that equates 159.10 with 86% provided it is not contradicted later.
	($) 185	c.a.	**A1**	
(c)	$\frac{156}{169} \times 52$	o.	**M1**	ww2 **Alt. Method** $\frac{156}{156+169} = \frac{x}{x+52}$ o.e.
	48(cm)	c.a.	**A1**	
(d)(i)	$\frac{11}{20} \times 36$	o.	**M1**	ww2 Method not spoilt by also doing $\frac{9}{20} \times 36$
	19.8(km)	c.a.	**A1**	
(ii)	$36 \times \frac{23}{2}$	o.	**M1**	ww2 Condone 19.8:16.2 16.2:19.8 is M1A0
	414(km)	c.a.o.	**A1**	ww2 **12**