Degree of accuracy

Mark Scheme

Level	IGCSE
Subject	Maths
Exam Board	Edexcel
Topic	Number and Algebra
Sub Topic	Degree of accuracy
Booklet	Mark Scheme

Time Allowed: 46 minutes

Score: /38

Percentage: /100

Grade Boundaries:

A*	A	B	C	D	E	U
>85%	75%	70%	60%	55%	50%	<50%

Question Number	Working	Answer	Mark	Notes	
1.	1.75 seen		2	M1	
		8		A1	
					Total 2 marks

2. (i)		136.5	1	B1	
(ii)		137.5 or 137 .49 recurring or 137.499..	1	B1	dot above 9 for recurring or 137.499..... (i.e .499 or better)
					Total 2 marks

3.	42.875 seen		4	B1	Also accept 42.874$\dot{9}$, 42.87499... throughout
	$\sqrt[3]{42.875}$			B1	Also award for 3.5 if first B1 scored ie if 42.875 seen
	6×3.5^2			M1	dep on both B1s
		73.5		A1	cao Award 4 marks if answer is correct and both B marks scored
					Total 4 marks

4. (a)	3.65 x 6		2	M1	for 3.65 or $3.64\dot{9}$ or 3.6499…
		21.9		A1	Also accept $21.8\dot{9}$ or 21.899…
(b)	75 **or** 12.5 **or** $12.4\dot{9}$		3	M1	
	$\dfrac{75}{12.5}$ **or** 75 = w × 12.5 **or** $\dfrac{75}{12.4\dot{9}}$ **or** 75 = w × $12.4\dot{9}$			M1	for 75 **and** 12.5 (or $12.4\dot{9}$)used correctly
		6		A1	cao dep on both method marks
					Total 5 marks

5.	168.5 – 121.5		47	2	M1 for 168.5 **or** $168.4\dot{9}$ **or** 168.499… **or** 121.5 A1 for 47 with no incorrect working
					Total 2 marks

6.	165 ÷ 1250 or 164.9 rec ÷ 1250		0.132	3	M2 M1 for 165 or 164.9 rec or 1250 selected. A1 cao
					Total 3 marks

7.	1.05 selected 0.175 selected $\sqrt{\dfrac{1.05}{0.175}}$ oe		2.45	4	B1 B1 M1 Allow $\sqrt{6}$ or "x"^{2} = or 6 (from 1.05 0.175) A1 (2.44948) awrt 2.45 dependent on M1
					Total 4 marks

Question	Working	Answer	Mark	Notes
8.	2.85 x 60 ÷ 4.5 oe	38	3	M2 M1 for 4.5 **or** 2.85 selected or used. Accept $4.4\dot{9}$ or $2.84\dot{9}$ A1 38 must come from correct working, although 38 without working gets M2A1
				Total 3 marks

Question		Working	Answer	Mark	Notes
9.	(a)		40, 60, 20	2	B2 Award B1 for any one correct. Allow standard form, but not trailing zeros (40.0/40.00 etc)
	(b)	$\dfrac{"40"+"60"}{"20"}=\dfrac{100}{20}$		2	M1 For adding their 40 and 60 correctly (not 42.37 and 58.92) or for correct working with rounded figures.
				5	A1cao dep on M mark awarded above.
					Total 4 marks

Q	Working	Answer	Mark	Notes
10.	400.5 or $400.4\dot{9}$ or 399.5 or 50.25 or 50.15 or $50.24\dot{9}$			B1 any correct UB or LB
	$\dfrac{400.5}{50.15}$ **or** $\dfrac{400.4\dot{9}}{50.15}$			M1
		7.99		A1 or 7.986...
				Total 3 marks

11.	41.5 **or** 42.5 **or** 24.5 **or** 23.5 **or** 14.5 **or** 13.5			B1
	$(y =)\dfrac{2 \times 41.5}{24.5 - 13.5}$		3	M1
		7.5		A1 accept $\dfrac{83}{11}$ or 7.55 or $7.5\dot{4}$ (depending on M1) **NB: Answer <u>must</u> come from correct working**
				Total 3 marks

12.	58.5 **or** 57.5 **or** 27.5 **or** 28.5 **or** 18.5 **or** 17.5			B1 for any one
	$\dfrac{58.5}{27.5 - 18.5}$		3	M1
		6.5		A1 from correct working
				Total 3 marks