



Percentages

Mark Scheme 1

Level	IGCSE
Subject	Maths (0580)
Exam Board	Cambridge International Examinations (CIE)
Paper Type	Extended
Topic	Number
Sub-Topic	Percentages
Booklet	Mark Scheme 1

Time Allowed: 66 minutes

Score: /55

Percentage: /100

Grade Boundaries:

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

1	3.75 or $3\frac{3}{4}$	1	
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2	(a)	(i)	48	2	M1 for $\frac{72}{3}$
		(ii)	32.4[0]	1	
		(iii)	$\frac{13}{30}$	2	M1 for $\frac{72 - \text{their(ii)} - 8.4}{72}$ oe
		(iv)	24	3	M2 for $\frac{19.2}{0.8}$ oe or M1 for recognising 19.2 is 80%
	(b)		660	3	M2 for $\frac{550 \times 2 \times 10}{100} + 550$ oe or M1 for $\frac{550 \times 2 \times 10}{100}$ oe
	(c)		663.9[0]	2	M for 550×1.019^{10} oe
	(d)		1.5[0]	3	M2 for $\sqrt[10]{\frac{638.3[0]}{550}}$ oe or M1 for $550 \times m^{10} = 638.3[0]$

3	<p>(a) (i) $\frac{13}{13+8+3} \times 12000$ with no subsequent errors</p> <p>(ii) 4000</p> <p>(b) $2 \times 6500 + 5 \times \text{their(a)(ii)} + (12000 - 6500 - \text{their(a)(ii)})$</p> <p>or $(13 \times 2 + 8 \times 5 + 3 \times 1) \times 500$</p> <p>(c) 37 500</p> <p>(d) $\frac{11}{26}$ cao</p> <p>(e) 89 500</p>	<p>1</p> <p>1</p> <p>2</p> <p>3</p> <p>2</p> <p>1</p>	<p>B for any two of 2×6500, $5 \times \text{their(a)(ii)}$, $(12000 - 6500 - \text{their(a)(ii)})$ seen</p> <p>or $13 \times 2 + 8 \times 5 + 3 \times 1$</p> <p>M2 for $\frac{34500}{100-8} \times 100$ oe</p> <p>or M1 for 34500 associated with $(100 - 8)\%$</p> <p>M1 for any correct simplified version of $\frac{2750}{6500}$</p>
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4	3826 or 3826.38	2	M1 for $8000 \times \left(1 - \frac{10}{100}\right)^7$ oe
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5	2500 nfw	3	M2 for $2475 \div \left(1 - \frac{1}{100}\right)$ oe or M1 for 2475 associated with 99%
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6	(a) (i)	3.9[0]	2	M1 for $2.6 \div 2$
	(ii)	$\frac{13}{18}$ cao	2	B1 for any correct unsimplified fraction
	(iii)	24	3	M2 for $9 \div 0.375$ oe or M1 for associating 9 with $(100 - 62.5)\%$
	(b)	109 cao	3	B2 for 108.5 to 108.6 or M1 for $250 \times \left(1 - \frac{8}{100}\right)^{10}$ oe

7	(a)	$\frac{1.5}{100} \times 450000$ oe	1	Accept equivalent methods
	(b)	6000	3	M2 for $\frac{6750}{112.5} \times 100$ oe or M1 for 112.5% associated with 6750 oe
	(c)	376.25 cao final answer	2	B for 21.5 and 17.5 seen
	(d)	22.4	2	M1 for 200^2 or 2^2 seen oe
	(e)	5184	2	M1 for $12 \times 16 \times 27$
	(f)	9023	3	M1 for $12000 \div 1.33$ A1 for 9022.55 to 9022.56 or 9022.6 or 9020 B1indep for their answer rounded to the nearest euro if possible