Mark scheme

Percentages

Mathematics 0580 · Questions from Paper 1, Paper 2 and Paper 4

Total marks

37

MARKS FOR EACH QUESTION

1	2	3	4	5	6	7	8	9	10	Total
1	2	2	2	2	2	3	4	4	15	**37**

Question 1 **[1]**

1	1984	**1**	

Question 2 **[2]**

2	2.5	**2**	**M1** for 2200 or 0.055 seen or **SC1** for answer figs 25

Question 3 **[2]**

3	25.3[0]	**2**	**M1** for $22 \times \frac{15}{100}$ oe or better

Question 4 **[2]**

4	17.5	**2**	**M1** for $(\frac{56.40}{48} - 1)$ [× 100] oe or $\frac{56.40 - 48}{48}$ [×100] or $\frac{56.40}{48} \times 100$ [− 100]

Question 5 **[2]**

5	8	**2**	**M1** for $\frac{5 - 4.60}{5}$ [×100] or $\frac{4.60}{5} \times 100$

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Question 6 **[2]**

6	475	**2**	**M1** for $x \times \frac{8}{100} = 38$ or for $\frac{38}{8} \times 100$ oe

Question 7 **[3]**

7	19	**3**	**M2** for $\left(1+\frac{40}{100}\right)\left(1-\frac{15}{100}\right)$ [*ma*] oe or **M1** for $F = kma$ or better or $\left(1+\frac{40}{100}\right)$ **and** $\left(1-\frac{15}{100}\right)$ oe seen

Question 8 **[4]**

8(a)	51	**2**	**M1** for $60 \times \frac{100-15}{100}$ oe or **B1** for 9
8(b)	68.40	**2**	**M1** for [ ] $\times \frac{100-15}{100} = 58.14$ oe

Question 9 **[4]**

9	35	**4**	**M3** for $\frac{27 \div (75-12.5)}{4 \div 12.5} \times 100[-100]$ oe or $\left(\frac{27 \div (75-12.5)}{4 \div 12.5} - 1\right)[\times 100]$ oe or $\frac{27 \div (75-12.5) - (4 \div 12.5)}{4 \div 12.5}[\times 100]$ oe or $\left(\frac{12.5}{4} \div \frac{62.5}{27}\right) \times 100[-100]$ OR **M1** for 4 ÷ 12.5 oe **M1** for 27 ÷ (75 –12.5) oe

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Question 10 **[15]**

10(a)(i)	600 ÷ (11+ 9) × 11 [=330] with no errors seen	**M1**	Could be in separate steps
10(a)(ii)	270	**1**	
10(b)(i)	372 cao nfww	**3**	**B2** for answer 371.7… or **M1** for $330 \times \left(1+\frac{1.5}{100}\right)^{8}$ oe not spoiled After zero scored, **SC1** for answer 42 or 41.7…
10(b)(ii)	12.6 or 12.7 or 12.63 to 12.73	**2**	**M1** for $\frac{\textit{their}\,\textbf{(b)(i)}-330}{330}$ or $\frac{\textit{their}\,\textbf{(b)(i)}}{330}\times 100$ soi by 112.7 or 113 After zero scored, **SC1** for answer 12%
10(c)(i)	$\frac{99}{280}$ cao final answer	**1**	
10(c)(ii)	27.5[0]	**3**	**M2** for $24.75 \div \frac{100-10}{100}$ oe or **M1** for recognising 24.75 as 90[%] oe
10(d)(i)	32 cao	**2**	**M1** for $\left(1-\frac{20}{100}\right)\left(1-\frac{15}{100}\right)$ [x]oe or for 0.15 × 0.8 [x] oe
10(d)(ii)	13 cao	**2**	**M1** for $\left(1-\frac{20}{100}\right)\left(1-\frac{15}{100}\right)\times x = 40.84 - 32$ oe seen or for *their* **(d)(i)** + $\left(1-\left(\frac{\textit{their}\ \textbf{(d)(i)}}{100}\right)\right)x = 40.84$ oe

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