

This test is divided into non-calculator (25 marks/minutes) and calculator (25marks/minutes) sections, which can be delivered separately.

The following marks are awarded for each question.

B	Unconditional accuracy mark
M	Method mark – the correct method must be shown but there may be an arithmetic error; the sight of the value given in brackets implies the award of the method mark
A	Accuracy mark – unless the question specifies that working must be shown then the sight of the correct answer implies the award of full marks (unless the answer clearly comes from incorrect working)
C	Communication mark
P	Process mark to show correct process for problem solving. Any other process of a similar standard to achieve an accurate result is acceptable to achieve this mark
FT	Incorrect values may be followed through from one step to the next provided that the correct method is seen in each step and the only errors are arithmetic. This is shown in mark schemes by putting a number in inverted commas
OE	Or equivalent answer mark

Non-Calculator			
Q	Answer	Mark	Comment
1	20 (%)	M1	for $9.60 - 8 (= 1.60)$
		M1	“1.60” $\div 8 \times 100$ OE
		A1	

3	$1\frac{17}{20}$	M1	for correctly decomposing into non mixed numbers, e.g. $\frac{17}{4} - \frac{12}{5}$, e.g. $4 - 2$ and $\frac{1}{4} - \frac{2}{5}$
		M1	for correct method to write all fractions with a common denominator, e.g. $\frac{85}{20} - \frac{48}{20}$ OE, e.g. $4 - 2$ and $\frac{5}{20} - \frac{8}{20}$ (allow one numerator error)
		A1	

5	$1\frac{7}{8}$	M1	for $\frac{5}{3} \times \frac{9}{8}$
		M1	for $\frac{45}{24}$ or $1\frac{21}{24}$ or $\frac{15}{8}$
		A1	
7		B1	for $(x) = 0.727272\dots$
		M1	for $100x - x = 72.727272\dots - 0.727272\dots$
		C1	for completing the proof, e.g. $x = \frac{72}{99} = \frac{8}{11}$

 Calculator			
9	(£)36	M1	for 1 part = $9.60 \div 4 (= 2.40)$ or $(7x \div 15) - (3x \div 15)$ $\frac{7x}{15} - \frac{3x}{15} = 9.60$
		M1	for a complete method e.g. “2.4(0)” $\times (5 + 3 + 7)$
		A1	
11	£9540.61	M2	for $14\,000 \times \left(\frac{100-12}{100}\right)^3$ OE; M1 for $14\,000 \times (100 - 12) \div 100$ OE, e.g. 12 320
		A1	accept £9540.60 to £9540.61
13a	$\frac{1}{5}$	B1	accept 0.2
13b	$\frac{5}{11}$	B1	accept 0.454545... OE

15	$9\frac{1}{3}$	M1	for $\frac{28}{3}$
		A1	
17	8400	M2	for $8653.68 \div (1.01 \times 1.02)$ OE; M1 for $8653.68 \div 1.01$ (=8568) OE or $8653.68 \div 1.02$ (= 8484)]
		A1	

Non-Calculator			
Question	Topic	Step	Marks
1	Use a unitary method to find a percentage, e.g. if £40 is 60%, find 1% by dividing by 60 and then 100% by multiplying by 100; give them the scaffolding to answer the question	6th	3
3	Add and subtract fractions (mixed) – positive and negative	7th	3
5	Multiply and divide simple fractions (mixed) – positive and negative	8th	3
7	Convert a recurring decimal to a fraction in simple cases	10th	3

 Calculator			
9	Divide a quantity into more than two parts in a given ratio	7th	3
11	Use compound interest	7th	3
13	Find the reciprocal of simple numbers/fractions mentally, e.g. 10 and $\frac{1}{10}$, $\frac{1}{3}$ and 3, etc.	7th	2
15	Multiply and divide simple fractions (mixed) – positive and negative	8th	2
17	Find the original amount after repeated percentage change	10th	3

