Questions

Q1.

Lydia is buying a ring.
The ring costs £60
She pays a deposit of 40%.
Work out how much she pays as the deposit.

£. . . . .

(Total for Question is 2 marks)

Q2.

A set of tyres normally costs £500
In a sale there is a 30% discount.

Work out the sale price of the set of tyres.

£. . . . .

(Total for Question is 3 marks)

Q3.

A ticket to a theme park costs £35 plus 20% VAT.

Work out the total cost of the ticket.

. . . .

(Total for Question is 3 marks)

Q4.

There are 210 counters in a bag.

30% of these counters are red.

Work out the number of red counters in the bag.

. . . .

(**Total for question = 2 marks**)

Q5.

(a) Write 0.7 as a fraction.

....
(1)

(b) Write 0.3 as a percentage.

....
(1)

(c) Write $\frac{8}{12}$ in its simplest form.

....
(1)

(Total for Question is 3 marks)

Q6.

* During a 10 year period, the number of people living in Sherbury increased by 5% to 20 265

In the same period, the number of people living in Yaston increased by 7.5% to 13 502

Compare the increase in the number of people living in Sherbury with the increase in the number of people living in Yaston during this 10 year period.

(Total for question = 3 marks)

Q7.

Sally has £520
Katie has £360

Sally and Katie are each going to give 15% of their money to charity.

Work out the total amount of money they give to charity.

£ ....

(Total for question = 3 marks)

Q8.
What is 10% of £50?

£ . . . .

(Total for Question is 1 marks)

Q9.

(a)   Work out $\dfrac{1}{4}$ of £20

£ ....

(1)

(b)   Write 0.7 as a fraction.

....

(1)

(c)   Write 3% as a decimal.

....

(1)

(d)   Work out 20% of £80

£ ....

(2)

(Total for question = 5 marks)

Q10.

(a)   Write down the percentage of this shape that is shaded.

....%
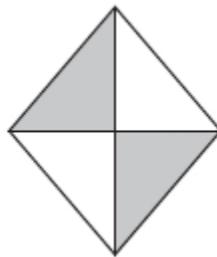
(1)

(b)   Write down the fraction of this shape that is shaded.

....
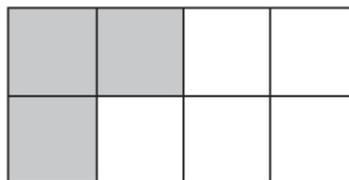
(1)

(c)   Shade $\dfrac{1}{5}$ of this shape.

(1)

Here are some fractions.

$$\frac{3}{10} \qquad \frac{2}{8} \qquad \frac{4}{12} \qquad \frac{12}{40} \qquad \frac{5}{20}$$

Two of these fractions are equivalent to $\frac{1}{4}$

(d) Which two fractions?

.... and ....

(2)

(Total for question = 5 marks)

Q11.

Write these numbers in order of size.
Start with the smallest number.

$$\frac{3}{7} \qquad 41\% \qquad 0.45 \qquad \frac{2}{5} \qquad 0.405$$

....

(Total for question = 2 marks)

Q.**12.**

Jay is paid £2000 each month.

He saves 6% of the £2000 each month.

How many months will it take Jay to save £480?

.... months

(Total for question = 3 marks)

Q13.

Bhavin buys a car in a sale.

Before the sale, the cost of the car was £6720
In the sale, the cost of every car is reduced by 20%.

Bhavin pays a deposit of £1500
He will pay the rest of the cost in 24 equal monthly payments.

Work out the amount of each monthly payment.
You must show all your working.

£ ....

(Total for question = 5 marks)

Q14.

Petra booked a family holiday.
 The total cost of the holiday was £3500 **plus** VAT at 20%.

Petra paid £900 of the total cost when she booked the holiday.
 She paid the rest of the total cost in 6 equal monthly payments.

Work out the amount of each monthly payment.

....

(Total for Question is 5 marks)

Q15.

Danny bought a car for £10 000

The value of the car depreciated by 20% in the first year.
Then the value of the car depreciated by 10% in the second year.

Work out the value of Danny's car at the end of two years.

£ . . . .

(Total for Question is 3 marks)

Q16.

Danielle invested £2800 for n years in a savings account.

She was paid 2.5% per annum compound interest.
The interest is paid into the account at the end of each year.

At the end of n years, the amount of money in the savings account is greater than £3000 for the first time.

Work out the value of n.

....

(Total for question = 2 marks)

Mark Scheme

Q1.

Question	Working	Answer	Mark	Notes
	10% = 6 6 × 4 = 24	24	2	M1 40 ÷ 100 × 60 oe or any complete method, eg 10% = 6, 6 × 4 A1 cao SC B1 for 36 or 84

Q2.

PAPER: 5MB2H_01

Question		Working	Answer	Mark	Notes
			350	3	M1 for finding 30% of 500 (=150) M1 dep for subtraction of discount from 500 A1 cao OR M1 for $1 - 0.3$ $(= 0.7)$ M1 dep for $500 \times$ "0.7" A1 cao

Q3.

		Working	Answer	Mark	Notes
			42	3	M1 for correct method to find 20% of 35 (=7) M1 for correct method to increase 35 by 20% A1 cao

Q4.

Question		Working	Answer	Mark	Notes
			63	2	M1 for $\frac{30}{100} \times 210$ or 0.3×210 or $21 + 21 + 21$ oe A1 cao

Q5.

		Working	Answer	Mark	Notes
	(a)		$\frac{7}{10}$	1	B1 for $\frac{7}{10}$ oe
	(b)		30	1	B1 cao
	(c)		$\frac{2}{3}$	1	B1 cao

Q6.

Question	Working	Answer	Mark	Notes
*	Sher Yas Old 19300 12560 New 20265 13502 Inc 965 942	Correct comparison (supported)	3	M1 for a correct method to calculate the population at the beginning of the 10 year period for at least one place. eg $\frac{20265}{1.05}$ (= 19 300) oe or $\frac{13502}{1.075}$ (= 12 560) oe A1 for 965 (Sherbury) **and** 942(Yaston) C1 (dep on M1) ft for statement comparing increases leading to conclusion based on two comparable amounts eg increase in Sherbury is greater than increase in Yaston

Q7.

Question	Working	Answer	Mark	
		132	3	M1 for 0.15 × 520 (=78) or 0.15 × 360 (=54) or for 520 + 360 (=880) M1 (dep) for "78" + "54" or for 0.15 × "880" A1 cao

Q8.

Question	Working	Answer	Mark	Notes
	50 ÷ 10 or $\frac{10}{100}$ × 50 =	£5	1	B1

Q9.

Question	Working	Answer	Mark	Notes
(a)		5	1	B1 cao
(b)		$\dfrac{7}{10}$	1	B1 accept any equivalent vulgar fraction
(c)		0.03	1	B1 cao
(d)		16	2	M1 for a method to work out 20% of 80 e.g. 80 ÷ 10 × 2 or 2 × 8 oe A1 cao

Q10.

PAPER: 1MA0_1F				
Question	Working	Answer	Mark	Notes
(a)		50	1	B1 cao
(b)		$\dfrac{3}{8}$	1	B1 cao
(c)		2 squares shaded	1	B1 cao
(d)		$\dfrac{2}{8}$ and $\dfrac{5}{20}$	2	B2 for both correct (B1 for one correct)

Q11.

Question	Working	Answer	Mark	Notes
	$\dfrac{2}{5}$, 0.405, 41%, $\dfrac{3}{7}$, 0.45	Ordered numbers	2	M1 for conversion to decimals or conversion to percentages or correct order with one error or correct order but reversed. A1 for correct order

Q12.

PAPER: 1MA0_2F				
Question	Working	Answer	Mark	Notes
		4	3	M1 for method to find 6% of 2000 (= 120) M1 (dep) for 480 ÷ '120' or for repeated addition of '120' to 480 A1 cao

Q13.

Question	Working	Answer	Mark	Notes
		161.50	5	M2 for a correct method to decrease 6720 by 20%, eg 6720 × 0.8 (= 5376) or 6720 × 0.2 (= 1344 and 6720 − 1344 (= 5376)) (M1 for a correct method to find 20% of 6720 eg 6720 × 0.2 or $\frac{20}{100}$ × 6720 (= 1344)) M1 for subtracting 1500 (= 3876) after a percentage calculation M1 "3876" ÷ 24 after the subtraction of 1500 A1 for 161.5(0)

Q14.

		Working	Answer	Mark	Notes
			550	5	M1 for a correct method to find 20% of an amount e.g. 3500 × 0.2 oe (= 700) M1 for a correct method to increase an amount by 20% e.g. 3500 × 1.2 oe (= 4200) M1 for subtracting 900 M1 for division by 6 A1 for 550 **NB** Operations may occur in any order as long as they could lead to the correct answer. Award marks until a breakdown in method occurs.

Q15.

Question	Working	Answer	Mark	Notes
	$10\ 000 \times 0.8$ $8000 \times 0.9 = 7200$ OR $10\ 000 - \frac{20}{100} \times 10\ 000 =$ 8000 $8000 - \frac{10}{100} \times 8\ 000$ OR $10\ 000 \times 0.8 \times 0.9$	7200	3	M1 for $10\ 000 \times 0.8$ (= 8000) M1 (dep) for "8000" $\times 0.9$ (= 7200) A1 for £7200 cao OR M1 for $10\ 000 - \frac{20}{100} \times 10\ 000$ oe M1 (dep) for "8000" $- \frac{10}{100} \times$ "8 000" oe A1 7200 cao OR M1 for 0.8×0.9 (=0.72) M1 (dep) for $10\ 000 \times$ "0.72" A1 for 7200 cao [SC: B1 for an answer of 7000 if M0 scored]

Q16.

Question	Working	Answer	Mark	Notes
		3	2	M1 for an attempt to evaluate 2800×1.025^n for at least one value of n (with $n > 1$) OR $\dfrac{3000}{2800}$ (=1.0714..) and 1.025^n evaluated (n>1) OR finding at least two correct interest payments (ie 70 and 71.75) A1 cao