Paper: 1MA1/1F

Question	Working	Answer	Mark	Notes
5 **Q1**		42	M1	for showing method to work out 60% of 70, eg 0.6 × 70 **or** (70 ÷ 10) × 6 (= 42)
			A1	cao

Paper: 1MA1/2F

Question	Answer	Mark	Mark scheme	Additional guidance
11 **Q2**	4	M1	for $\frac{30}{100} \times 80$ (=24) oe or for 104	
		M1	(dep) for 28 – "24" or 108 – 104	Numbers in subtraction may be reversed
		A1	for 4 or –4	

Paper: 1MA1/2F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
18 (a) **Q3**	explanation	C1	explanation eg should be 1.03, this is 30% (not 3%) **Acceptable examples** Because 1.3 is 130% He is increasing it by 30% 1.3 means 1.30, not 1.03 He needs to put a 0 in front of the 3 1.3 is the wrong decimal He should multiply by 0.03 3% is 0.03, (not 1.3) His answer should be 154.5 He is meant to increase it by 4.5, not by 45 **Not acceptable examples** Because he is increasing by 130%, not 3% He needs to find 1% and then times it by 3	
(b)	$(150 \times)\ 0.97$ $= 145.5$	B1	for 0.97 (or $\dfrac{97}{100}$ or 97%) and 145.5	

Paper: 1MA1/3F

Question	Answer	Mark	Mark scheme	Additional guidance
11 **Q4**	40	P1	for $100 - 30$ (=70) **or** $1 - 0.3$ (=0.7) **or** $1 - \frac{3}{10}$ $(= \frac{7}{10})$ **or** $28 \div 7 \times 3$ (=12)	
		P1	for a complete process eg $28 \div$ ("70" $\div$ 10) $\times$ 10 oe **or** $28 +$ "12"	
		A1	cao	

Paper: 1MA1/3F

Question	Answer	Mark	Mark scheme	Additional guidance
18 **Q5**	1204	P2	for a full process to find 120% of 14200 eg, 1.2×14200 (=17040) **or** $(0.2 \times 14200) + 14200$ (=17040)	
		(P1	for process to find 20% of 14200 eg, 0.2×14200 (=2840) oe)	
		P1	for [cost] $- 5000$	[cost] must be greater than 14200
		A1	cao	
			SCB1 for answer of 920 if P0 scored	

Paper: 1MA1/1F				
Question	Answer	Mark	Mark scheme	Additional guidance
15 **Q6**	24	M1 A1	for method to find 15% of 160, eg $160 \times \frac{15}{100}$ oe (= 24) **or** 10% = 160 ÷ 10 (= 16) plus 5% = "16" ÷ 2 (= 8) (= 24) cao SC B1 for answer of 136 or 184 if M0 scored	When using partitioning methods, the method to find individual %s must be clear including the need to show an intention to sum eg. 10% = 16 + 5%=8

Paper: 1MA1/2F				
Question	Answer	Mark	Mark scheme	Additional guidance
16 **Q7**	243	M1 A1	for 1.8 ÷ 100 × 4500 oe (= 81) **or** for a complete method eg 4500 ×1.8 × 3 ÷ 100 oe **or** for 4743 **or** 4257 cao	Award M1 for 4500×1.018^n

Paper: 1MA1/3F

Question	Answer	Mark	Mark scheme	Additional guidance
15 **Q8**	72	P1 P1 P1 A1	for a correct process to find the number of boys or girls, eg boys = 0.55 × 800 (=440) **or** girls = 0.45 × 800 (=360) **or** process to find proportion that are boys having packed lunch, eg 0.55 × 0.4 (=0.22) for a correct process to find the total number of school dinners or packed lunches, eg SD = 800 × 0.69 (=552) **or** PL = 800 × 0.31 (=248) **or** process to find proportion that are girls having packed lunch, eg 0.31 – "0.22" (=0.09) **or** process to find the number of boys having school dinner, eg "440" × 0.6 (= 264) **or** number of boys having packed lunch, eg "440" × 0.4 (=176) for a correct process to find the number of girls having packed lunches, eg "800" × "0.31" – (440 × 0.4) **or** "0.45" × "800" – ("800" × "0.69" – "440" × 0.6) **or** "0.09" × 800 cao	

Additional guidance table:

	PL	SD	Total
Boys	176	264	440
Girls	72	288	360
Total	248	552	800

Paper: 1MA1/3F				
Question	Answer	Mark	Mark scheme	Additional guidance
6 **Q9**	16	M1 A1	for a complete method to find 20% of 80 eg 80 × 0.2 oe cao SC B1 for an answer of 64 or 96	

Paper: 1MA1/2F				
Question	Answer	Mark	Mark scheme	Additional guidance
11 **Q10**	130	P1 P1 P1 A1	process to find the total number of children, eg 214 – 14 (= 200) process to find the number of children wearing a hat, eg "200" × 35 ÷ 100 (= 70) **or** process to find the multiplier for the percentage of children not wearing a hat, eg (100 – 35) ÷ 100 (= 0.65) for full process to find the number of children not wearing a hat, eg "200" – "70" **or** "200" × "0.65" **or** 214 – "70" – 14 cao	

Paper: 1MA1/1F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
19 **Q11**	288	M1 M1 A1	for a method to find 20% eg 240 × 20 ÷ 100 (= 48) **or** shows a multiplier of 1.2 oe **or** 120% for a complete method eg 240 + "48" **or** 240 × 1.2 oe **or** 240 × 120 ÷ 100 cao	

Paper: 1MA1/3F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
19 **Q12**	42	P1 P1 P1 A1	for process to find number of red counters, eg. 400 ÷ 8 × 3 (= 150) **or** process to convert both to percentages: 3/8 as 37.5 and 82/400 as 20.5 **or** process to convert both to fractions with common denominator: eg 3/8 as 75/200 and 82/400 as 41/200 oe for process to find number of green counters, eg 400 – "150" – 82 (=168) **or** process to find the percentage of red and yellow counters eg "37.5" + "20.5" (=58) or ("150" + 82) ÷ 400 × 100 (=58) for complete process to find the percentage of counters that are green, eg "168" ÷ 400 × 100 or 100 – (37.5 + 20.5) or 100 – "58" cao	NB could use other decimals eg 0.375, 0.205 or % or fractions

Paper 1MA1: 1F

Question	Working	Answer	Mark	Notes
30 **Q13**		4	M1	for a complete method eg 2.80 × 100 ÷ (100−30) oe **or** 2.80 ÷ 0.7 oe **or** for build up method but must show all intermediate steps unless all figures are correct eg 2.8 ÷ 7 = 0.4 and "0.40" × 10 (=4)
			A1	cao

Paper: 1MA1/2F

Question	Working	Answer	Mark	Notes
17 **Q14**	£6 − £5.64 = 36p or 50p – 47p = 3p 6.3829787…%	6.4	P1 P1 A1	for a strategy to compare the same number of bottles e.g. £5.64 ÷ 12 (= 47 or 0.47) or 12 × 50p (= 6 or 600) or 36 or 0.36 or 3 or 0.03 for start of process to find percentage profit e.g. $\frac{"36"}{564}$ or $\frac{"3"}{"47"}$ or $\frac{"6"}{5.64}$ or $\frac{50}{"47"}$ oe with consistent units for answer in the range 6.3 to 6.4

Paper: 1MA1/2F

Question	Working	Answer	Mark	Notes
8 (a) **Q15**		Statement	C1	States one thing wrong eg vertical scale is not linear oe
(b)		Trend described	C1	eg the trend is upwards, positive (trend) oe

Paper: 1MA1/1F

Question	Working	Answer	Mark	Notes
20 **Q16**		1545	M1	shows a method to find 3% eg 1500 × 0.03 (=45)
			A1	cao

Paper 1MA1: 2F

Question	Working	Answer	Mark	Notes
22 **Q17**		Secure Bank (supported)	P1	for a process to work out the interest after one year e.g. 0.02 × 25000 (= 500) or 0.043 × 25000 (= 1075) or for 1.02 or 25500 or 1.043 or 26075
			P1	for process to find value of the investment after 3 years or the multiplicative factor for 3 years at one of the banks, e.g. 25000 × 1.02 × 1.02 × 1.02 oe (= 26530...) or 1.02^3 (= 1.0612...) or 25000 × 1.043 × 1.009 ×1.009 oe (= 26546...) or 1.043 × 1.009 ×1.009 (= 1.0618......) [accept total interest of 1530...or 1546...if final values of investment are not found]
			C1	for Secure Bank from correct figures eg 26530.. and 26546..or 1530.. and 1546.. or 1.0612.. and 1.0618

Paper: 1MA1/3F

Question			Working	Answer	Mark	Notes
23	(a)	(i)		155 000	B1	cao
		(ii)		165 000 or 164 999 or 164 999.99	B1	165 000 or 164 999 or 164 999.99
Q18	(b)			200 000	M1	for recognising that 210 000 = 105% or a full method to find the original price eg 210 000 ÷ 1.05 oe (= 200 000)
					A1	cao

Paper: 1MA1/1F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
22 **Q19**	No (supported)	P1	for start to process, eg $2100 \times \frac{40}{100}$ (= 840) **or** $100 - 40$ (= 60)	May compare bonus shares of a single salesman or total bonus share for all 7 salesmen.
		P1	for process to find the 7 salesmen's share of bonus, eg $2100 -$ "840" (= 1260) **or** $2100 \times \frac{"60"}{100}$(= 1260)	
		P1	for process to find bonus amount each salesman gets eg "1260" ÷ 7 (= 180) **OR** process to find the total bonus for all salesmen if shared equally, eg $\frac{2100}{10} \times 7$ (= 1470)	
		P1	for process to compare what a single salesman gets under each scheme, eg "180" $\times \frac{25}{100}$ (= 45) and "$\frac{2100}{10}$" – "180" (= 30) **or** "180" $\times \frac{25}{100}$ (= 45) and "180" + "45" (= 225) oe and $\frac{2100}{10}$ (= 210) **or** $(\frac{2100}{10} -$ "180" ÷ "180" × 100 (= 16.6...) **OR** process to compare what all salesmen gets under each scheme, eg "1260" $\times \frac{25}{100}$ (= 315) and "1470" – "1260" (= 210) **or** "1260" $\times \frac{25}{100}$ (= 315) and "1260" + "315" (= 1575) oe and "1470" **or** ("1470" – "1260") ÷ "1260" × 100 (= 16.6...)	
		A1	'No' supported by correct figures, eg 45 and 30, 225 and 210, 315 and 210 **or** 1575 and 1470 **or** 16.(6...)(% and 25%)	Do not award unless correct figures have been shown to support a statement made that the salesman was not correct.

Paper: 1MA1/2F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
15	2.5	M1	for $(R =)\dfrac{100I}{PT}$ **or** $600 \times 5\ (= 3000)$ **or** $75 \times 100\ (= 7500)$ **or** $75 \div 5\ (= 15)$ **or** $75 \div 600\ (= 0.125)$	
Q20		M1	for $\dfrac{75 \times 100}{600 \times 5}$ oe **OR** $\dfrac{"15"}{600}\ (= 0.025)$ **or** "0.125" $\div 5\ (= 0.025)$ **or** 1.025	Calculations may be done in stages. May work in decimals or in percentages
		A1	cao	

Paper: 1MA1/3F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
21 **Q21**	260 to 260.5	M1 M1 A1	for 883 – 245 (=638) **or** 883 ÷ 245 (=3.60..) **or** 883 ÷ 245 × 100 (=360(.408..)) oe for a complete method to find the percentage increase eg "638" ÷ 245 × 100 (=260(.408..)) **or** 883 ÷ 245 × 100 − 100 (=260(.408..)) oe Accept answers in the range 260 to 260.5	

Paper: 1MA1/1F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
21	30	P1	for full process to find the number of bags sold eg 5 × 1000 ÷ 250 (= 20) **OR** for process to find selling price of 1 kg of sweets eg 0.65 × 4 (= 2.60)	This could be by repeated addition Calculations can be in £ or pence
Q22		P1	for [number of bags] × 0.65 **or** "20" × 0.65 (= 13) **or** "2.60" × 5 (= 13) **OR** for 10 ÷ "20" oe (= 0.50) **OR** for 0.65 × 4 (= 2.60) **and** 10 ÷ 5 (= 2)	[number of bags] can only come from 5 × 10 ÷ 250 (= 0.2) or 5 × 100 ÷ 250 (= 2) or 5 ÷ 250 (= 0.02)
		P1	(dep on previous P1) for a process to find the percentage profit eg ("13" − 10) ÷ 10 × 100 **or** (0.65 − "0.50") ÷ "0.50" × 100 **or** ("2.60" − "2") ÷ "2" × 100 **OR** "13" ÷ 10 ×100 (= 130) oe	3/10 or 0.3 is not enough but should be awarded 2 marks Award P3 for 130(%)
		A1	cao	

Paper: 1MA1/2F

Question	Answer	Mark	Mark scheme	Additional guidance
20 **Q23**	Shown (supported)	M1 A1 M1 C1	for substitution eg $4 \times 110 + 12$ for 452 (dep M1) for method to find value(s) needed for comparison eg $\dfrac{"452" - 442}{442} \times 100$ **OR** $\dfrac{5}{100} \times 442$ oe (= 22.1) **and** "452" – 442 (= 10) **OR** $\dfrac{5}{100} \times 442 + 442$ oe (= 464.1) **and** "452" shown with correct comparable values eg 2.2(6...)(%) **OR** 22.1 **and** 10 **OR** 452 **and** 464.1	

Paper: 1MA1/3F

Question	Answer	Mark	Mark scheme	Additional guidance
21 **Q24**	8	M1 M1 A1	for 158220 – 146500 (=11720) **or** 158220 ÷ 146500 (=1.08) for complete method, eg (158220 – 146500) ÷ 146500×100 oe **or** 1.08×100 – 100 cao	0.08 as an answer implies M1

Paper: 1MA1/3F

Question	Answer	Mark	Mark scheme	Additional guidance
25	12272.70 12272.71 or 12272.72	M1	for evidence of using a correct first step eg 200000×0.015 (= 3000) or 200000×1.015 (= 203000)	
Q25		M1	for evidence of a compound interest method eg 203000×0.015 (= 3045) or 203000×1.015 (= 206045) **or** 206045×0.015 (= 3090.675) or 206045×1.015 (= 209135.675) **or** 209135.675×0.015 (= 3137.035...) or 209135.675×1.015 (212272.710...) **or** 200000×1.015^t, $t \geq 2$	values may be rounded or truncated to 2 dp
		A1	for 12272.7(0) or 12272.71 or 12272.72 SC B2 for 212272.7(0) or 212272.71 or 212272.72	

Paper: 1MA1/1F

Question	Answer	Mark	Mark scheme	Additional guidance
24	20	P1	for process to find SP of 24 chocolate bars, eg. 0.50×24 (= 12) oe **or** for process to find the overall profit eg $(24 \times 0.5) - 10$ (=2) **or** for process to find CP of one chocolate bar, eg. $1000 \div 24$ (= 41.66…) oe	Working can be carried out in either pounds or pence.
Q26		P1	(dep) for start to a process to find percentage profit, eg. using $\frac{"12"-10}{10}$ **or** $\frac{"12"}{10}$ **or** $\frac{50-"41.66.."}{"41.66…"}$ oe with consistent units	
		A1	cao	

Paper: 1MA1/2F

Question	Answer	Mark	Mark scheme	Additional guidance
16 Q27	58	P1	for a correct process to find the pass mark for the exam or either paper eg $(60 + 90) \div 3 \times 2$ oe ($= 100$) **or** $60 \div 3 \times 2$ oe ($= 40$) **or** $90 \div 3 \times 2$ oe	It is possible to award P0P1 on this question. Accept 66% or better used for $\frac{2}{3}$
		P1	for a process to find 70% of 60 eg $\frac{70}{100} \times 60$ oe ($= 42$)	
		P1	for a complete set of processes to find the required mark "100" – "42"(=58) or "40"+ "60" – "42" (=58)	May be seen in parts
		A1	cao SC B2 for an answer of 48	

Paper: 1MA1/3F

Question	Answer	Mark	Mark scheme	Additional guidance
19 (a) Q28	140	M1	for complete method eg $56 \div 40 \times 100$	May be seen in different ways, eg 2.5×56
		A1	cao	
(b)	32	M1	for method to find percentage, eg $\frac{18}{56} \times 100$ ($=32.14\ldots$)	
		A1	for an answer in the range 32 to 32.2	

Paper: 1MA1/1F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
19 **Q29**	30	M1	for 80 – 56 (= 24) **or** for $\frac{56}{80} \times 100$ (=70) **or** (loss of) 10% = 80 ÷ 10 (= 8)	
		M1	for a complete method, eg "24" ÷ 80 × 100 **or** 100 – "70" **or** (80 – 56) ÷ "8" × 10	
		A1	cao	

Paper: 1MA1/1F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
23 **Q30**	Rahim (supported)	P1	for start to the process to find 20% for Tamara, eg 220000 × 0.2 oe (= 44000) **or** 30% for Rahim, eg 160000 × 0.3 oe (= 48000) **OR** for 1 – 0.2 (= 0.8) **or** 100 – 20 (= 80) **or** 1 + 0.3 (= 1.3) **or** 100 + 30 (= 130)	Build up processes are acceptable but must be complete and correct
		P1	for a complete process to find at least one new value, eg 220000 – "44000" (= 176 000) **or** 160000 + "48000" (= 208000) **OR** 220000 × "0.8" (=176000) **or** 160000 × "1.3" (=208000)	
		A1	for one correct value, 176 000 or 208 000	
		C1	for correct conclusion supported by correct figures eg Rahim, 176 000 and 208 000	Award 0 marks for a correct answer with no supportive working.

Paper: 1MA1/2F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
28 **Q31**	320 000	M1	for a complete method eg $272\,000 \div (\frac{100-15}{100})$	
		A1	cao	

Paper: 1MA1/2F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
23 **Q32**	7318.15	M1	for a correct first step eg working out increase for one year $7000 \times (100 + 3) \div 100$ $(= 7210)$ oe **or** $7000 \times 3 \div 100$ $(= 210)$ oe **or** find the multiplier for both years eg $(100 + 3) \div 100 \times (100 + 1.5) \div 100$ $(=1.04545)$	7315 or 315 implies M1
		M1	for a compound method, eg $7000 \times (100 + 3) \div 100 \times (100 + 1.5) \div 100$ oe **or** "7210" $\times 1.5 \div 100$ or $(= 108.15)$ oe	318.15 implies M1M1A0
		A1	cao	

Paper: 1MA1/2F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
26 **Q33**	152000	M1	for a complete method eg $165680 \div 109 \times 100$ or $165680 \div 1.09$ oe	
		A1	cao	

Paper: 1MA1/2F

Question	Answer	Mark	Mark scheme	Additional guidance
26 **Q34**	600.74	M1	works out decrease for one year, eg 679 × 4 ÷ 100 (=27.16) oe **or** 679 × (100 − 4) ÷ 100 (= 651.84) oe	Implied by 679× 0.12 (=81.48) or 679 × 0.88 (=597.52)
		M1	for compound method, eg 679 × "0.96"^{t}, $t \geq 2$ **or** "651.84" × "0.96" (= 625.76..) or "651.84" × "0.04" (=26.07) **or** for answers in the range 600.71 to 600.74 exclusive	Values may be rounded or truncated
		A1	accept 600.71 **or** 600.72 **or** 600.73 **or** 600.74	If the correct answer is seen and the difference found award M1M1A0

Paper: 1MA1/3F

Question	Answer	Mark	Mark scheme	Additional guidance
30 **Q35**	16 000	M1	for 13600 ÷ 0.85 (= 16000) oe	
		A1	cao	