Mark Scheme

Q1.

Question	Working	Answer	Mark	Notes
		3	M1 A1	for method to find halfway number, e.g. $(-4 + 10) \div 2$ or a number line with evidence of finding halfway value cao

(Q06 1MA1/1F/M3, Specimen papers)

Q2.

Question	Working	Answer	Mark	Notes
(a)		12 000	M1 A1	for approximations of 40 or 300 in a product, e.g. 40×300 or 40×298 or 39×300 for accurate answer to their product within the range 11700 to 12000
(b)		Overestimate plus reason	C1	ft for e.g. "overestimate since both estimates are greater than the exact values"

(Q12 1MA1/1F/M3, Specimen papers)

Q3.

Question	Working	Answer	Mark	Notes
		$(5 + 10) \times 3$ $= 45$	B2 [B1]	for $(5 + 10) \times 3 = 45$ [for $(5 + 10) \times 3$ oe or for 45]

(Q10 1MA1/2F/M3, Specimen papers)

Q4.

Question	Working	Answer	Mark	Notes
(a)		43	B1	cao
(b)		−17	B1	cao
(c)		12	M1 A1	for $(79 - 7) \div 6$; condone missing brackets cao

(Q09 1MA1/3F/M3, Specimen papers)

Q5.

Question	Working	Answer	Mark	Notes
(i)		$2 \times (7^2 - 2) = 94$	B1	for brackets correctly placed
(ii)		$16 \div (2 + 6) + 2 = 4$	B1	for brackets correctly placed

(**Q12 1MA1/3F/M3, Specimen papers**)

Q6.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	38	B1	cao	
(b)	6	M1	starts process to find input using inverse operations eg $28 + 2$ **or** sight of $+2 \div 5$ **or** by forming an equation eg $x \times 5 - 2 = 28$	$+2 \div 5$ could be seen in a flow diagram
		A1	cao	

(**Q10 1MA1/2F, Nov 2018**)

Q7.

Question	Answer	Mark	Mark scheme	Additional guidance
	80	B1	cao	

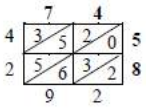
(**Q03 1MA1/1F, June 2019**)

Q8.

Question	Answer	Mark	Mark scheme	Additional guidance
	11	B1	cao	

(**Q05 1MA1/1F, June 2019**)

Q9.

Question	Answer	Mark	Mark scheme	Additional guidance
	4292	M1	for complete method with relative place value correct including addition of all the appropriate elements of the calculation	Working 592 3700 4292  70 4 50 3500 200 8 560 32 3500 + 560 + 200 + 32 = 4292
		A1	cao	

(**Q11 1MA1/1F, June 2019**)

Q10.

Question	Answer	Mark	Mark scheme	Additional guidance
	6	M1	for interpreting the table to find the number of green counters (26 + 7 (= 33)) or the number of red counters (16 + 11 (= 27)) or the difference in circles (26 – 16 (=10)) or squares (11 – 7 (=4))	33 – 27 = 6 10 – 4 = 6
		A1	cao	

(**Q07 1MA1/3F, June 2019**)

Q11.

Question	Answer	Mark	Mark scheme	Additional guidance
	2.4774(011…)	M1	for 8.77 or 3.54 or 2.477 or 2.47 or 2.48 or $\frac{877}{354}$	
		A1	for 2.4774(011…)	If the answer has been rounded to less than 4 dp but the figure is shown in working to 4 dp or more, award full marks. Ignore any incorrect digits after the 4th decimal place.

(**Q14 1MA1/3F, June 2019**)

Q12.

Question	Answer	Mark	Mark scheme	Additional guidance
	3170	B1	cao	

(Q03 1MA1/1F, Nov 2019)

Q13.

Question	Answer	Mark	Mark scheme	Additional guidance
	345	M1	for complete method with relative place value correct including addition of all the appropriate elements of the calculation. 230 115 345 2 3 3 | 0/2 0/3 1 1/0 1/5 5 4 5 **200 + 30 + 100 + 15 = 345** | | 20 | 3 | | 10 | 200 | 30 | | 5 | 100 | 15 | 23 + 23 + 23 + 23 + 23 = 115; 115 + 115 + 115 = 345	Accept all equivalent methods if complete. Partitioning methods may show a complete method which has been broken down into multiple stages. Multiple addition of 23 (or 15) acceptable if the correct number added is shown, and an attempt at addition is clear.
		A1	cao	

(Q14 1MA1/1F, Nov 2019)

Q14.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	43	B1	cao	
(b)	– 20 or ÷ 3	B1	for ÷ 3 **or** – 20 **or** $\times\frac{1}{3}$ **or** + –20	

(Q08 1MA1/2F, Nov 2019)

Q15.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	11	B1	cao	
(b)	22	M1	Starts to find input using inverse operations, $41 + 3$ (= 44) **or** sight of +3 **and** ÷2 **or** derivation of equation eg $2n - 3 = 41$	+3 and ÷2 could be seen in a flow diagram Evidence could be provided by algebraic statement, numerical statements or by diagrams
		A1	cao	

(**Q12 1MA1/1F, Nov 2020**)

Q16.

Question	Answer	Mark	Mark scheme	Additional guidance
	19	P1	for 4275 ÷ 28 (= 152(.678..)) **or** 153 **or** a build up to at least 150 × 28 (=4200)	Division may be seen as a build up method
		P1	for "152" × 28 (= 4256) **or** "153" × 28 (=4284) **or** ("152.678.." – 152) (=0.678..) **or** 4275 ÷ "152" – 28(= 0.125) **or** 4275 – "4200" (=75) oe	Use of 150× 28 or better for "4200"
		A1	cao	

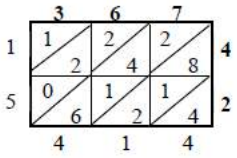
(**Q13 1MA1/2F, Nov 2020**)

Q17.

Question	Answer	Mark	Mark scheme	Additional guidance
	14	M1	for 42 ÷ 3	
		A1	cao	

(**Q07 1MA1/1F, Nov 2021**)

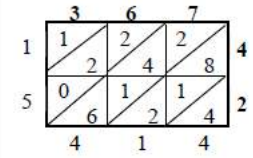
Q18.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	15.414	M1	for a complete method with relative place value correct including an intention to add all the appropriate elements of the calculation eg, 2 lines of the 1st method, internal numbers of grids, or complete structure shown of partitioning methods.	14680 734 15414  12000 + 2400 + 280 + 600 + 120 + 14 = 15414
		A1	for digits 15414	
		A1	(ft) dep on M1 for correct placement of the decimal point into their final answer	
(b)	37.4	M1	for a start to a method, eg 598.4 ÷ 16 (or 59.84 ÷ 1.6) = 3 (as a first digit)	A start to a repeated subtraction method or build-up method is acceptable if a correct first digit of 3 is found
		A1	for digits 374	
		A1	(ft) dep on M1 for correct placement of the decimal point into their final answer	

	300	60	7
40	12000	2400	280
2	600	120	14

(**Q20 1MA1/1F, Nov 2021**)

Q19.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	15.414	M1	for a complete method with relative place value correct including an intention to add all the appropriate elements of the calculation eg, 2 lines of the 1st method, internal numbers of grids, or complete structure shown of partitioning methods.	14680 734 15414  | | 300 | 60 | 7 | | 40 | 12000 | 2400 | 280 | | 2 | 600 | 120 | 14 | 12000 + 2400 + 280 + 600 + 120 + 14 = 15414
		A1	for digits 15414	
		A1	(ft) dep on M1 for correct placement of the decimal point into their final answer	
(b)	37.4	M1	for a start to a method, eg 598.4 ÷ 16 (or 59.84 ÷ 1.6) = 3 (as a first digit)	A start to a repeated subtraction method or build-up method is acceptable if a correct first digit of 3 is found
		A1	for digits 374	
		A1	(ft) dep on M1 for correct placement of the decimal point into their final answer	

(**Q01 1MA1/1H, Nov 2021**)

Q20.

Question	Answer	Mark	Mark scheme	Additional guidance
	780	P1	for 2500 – 940 (= 1560) **or** 2500 ÷ 2 (=1250) and 940 ÷ 2 (=470)	
		P1	for "1560" ÷ 2 **or** "1250" – "470"	
		A1	cao	

(**Q07 1MA1/2F, Nov 2021**)

Q21.

Question	Answer	Mark	Mark scheme
	Explanation	C1	for explanation, **Acceptable examples** Answer should be 14 Should work out 3 × 4 first Alec should times first instead of adding Not used BIDMAS/BODMAS BIDMAS/BODMAS He has done it in the wrong order Alec needs to use brackets so 2 + (3 × 4) Because you always do multiplication or division first **Not acceptable examples** Because the answer is wrong It is 2 + (3×4) = 15 It needs brackets Because working out should only be one sum

(**Q09 1MA1/2F, Nov 2021**)

Q22.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	9	B1	cao	
(b)	6	M1	starts to find input using inverse operations eg 154 ÷ 11 (= 14) **or** indicates ÷ 11 **and** − 8 **or** derivation of equation eg (8+ *n*) × 11 = 154 **or** starting to solve for unknown eg 154 − 8 × 11 (= 66)	÷11 and −8 could be seen in a flow diagram Evidence could be provided by algebraic statement, numerical statements or by diagram
		A1	cao	

(**Q12 1MA1/2F, June 2022**)

Q23.

Question	Answer	Mark	Mark scheme	Additional guidance
	Yes (supported)	M1	for 48 × 3 (=144) or 35 × 4 (= 140) or 48 ÷ 4 (=12)	
		M1	for 48 × 3 (=144) **and** 35 × 4 (= 140) or "140" ÷ 48 (=2.9…) or "140" ÷ 3 (=46.6…) or "12" × 3 (=36) or "144" ÷ 4 (=36) or "144" ÷ 35 (=4.1…)	
		C1	for Yes with 144 **and** 140 **OR** 36 **OR** 2.9… **OR** 4 (spare) **OR** 4.1… (each frame) **OR** 46.6… (in each box)	

(**Q11 1MA1/3F, June 2022**)

Q24.

Question	Answer	Mark	Mark scheme	Additional guidance
	5	M1 A1	for 40.15 or 8.03 seen in working cao	

(**Q15 1MA1/3F, June 2022**)

Q25.

Question	Answer	Mark	Mark scheme	Additional guidance
	144	P1 P1 A1	for process to begin to work with length, eg 8050 ÷ 25 (= 322) **or** 178 × 25 (= 4450) for full process to find number of lengths remaining, eg "322" – 178 **or** (8050 – "4450") ÷ 25 **or** 3600 ÷ 25 cao	3600 implies the first P1 mark

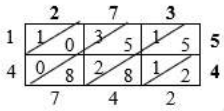
(**Q07 1MA1/3F, Nov 2023**)

Q26.

Question	Answer	Mark	Mark scheme	Additional guidance
	31	B1	cao	

(**Q02 1MA1/1F, Nov 2023**)

Q27.

Question	Answer	Mark	Mark scheme	Additional guidance
	14742	M1	for complete correct method with relative place value correct eg two lines of 1st method, internal numbers of grids, or complete structure shown of partitioning methods	13650 1092 14742  200 70 3 50 10000 3500 150 4 800 280 12 10000 + 3500 + 150 + 800 + 280 + 12 = 14742
		M1	(dep on M1) for addition of all the appropriate elements of the calculation	
		A1	cao	

(**Q14 1MA1/1F, June 2024**)

Q28.

Question	Answer	Mark	Mark scheme	Additional guidance
	379.86	P1	for process to work with number of miles or cost, eg 47879 – 47241 (= 638) **or** 47879 × 47 (= 2250313) or 47241 × 47 (= 2220327) **or** [mileage] × 47	working may be seen in £ or pence throughout [mileage] is any value they consider to be mileage
		P1	for process to work with miles and cost, eg "638" × 47 (= 29986) or "638" × 0.47 (= 299.86) **or** "2250313" – "2220327" (= 29986)	
		B1	(indep) for converting between pence and pounds, eg "29986" ÷ 100 **or** 47 ÷ 100 (= 0.47) **or** 80 × 100 **OR** miles divided by 100, eg "638" ÷ 100 (= 6.38) **or** 47879 ÷ 100 (= 478.79) **and** 47241 ÷ 100 (= 472.41)	
		A1	for 379.86	

(**Q09 1MA1/2F, June 2024**)

Q29.

Question	Answer	Mark	Mark scheme	Additional guidance
	645	B1	cao	

(**Q05 1MA1/1F, Nov 2024**)

Q30.

Question	Answer	Mark	Mark scheme	Additional guidance
	explanation	C1	for explanation **Acceptable examples** he should have multiplied first multiplication should be done before subtraction he should have done 3×4 first he didn't use BIDMAS/BODMAS/PEMDAS $5 - 12 = -7$ **Not acceptable examples** he was correct the answer is – 7 Olly's method gives the wrong answer BIDMAS/BODMAS/PEMDAS he should multiply first so $3 \times 4 = 12$ then $12 - 5 = 7$ he should have done $3 \times 4 = 12$ then $12 - 5 = 7$ he should have done 2×4 first	

(**Q12 1MA1/1F, Nov 2024**)

Q31.

Question	Answer	Mark	Mark scheme	Additional guidance
	10	P1	for process to find greatest number of bracelets for one colour, eg $52 \div 5$ (= 10(.4)) **or** $80 \div 7$ (= 11(.4..))	May be seen as a repeated addition or subtraction but must be complete for one colour, eg 50 or 70
		P1	for process to find greatest number of bracelets for both colours, eg $52 \div 5$ (= 10(.4)) **and** $80 \div 7$ (= 11(.4..))	May be implied by eg 50:70 or 50:77
		A1	cao	Must see working with both colours for this mark.

(**Q06 1MA1/2F, Nov 2024**)

Q32.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	Yes (supported)	P1	for start of process, eg 5×9 (= 45) **or** 10×14 (= 140) **or** 5×2 (= 10 (kg)) **or** $3 \div 2$ (= 1.5 (boxes))	Accept values rounded or truncated to 1dp in both (a) and (b). Ignore units
		P1	for process using ratio of areas, eg "140" ÷ "45" (= 3.1...) **or** for using ratio of amount of seed eg "10" ÷ 3 (= 3.3...) **or** for finding coverage for 1 kg of grass seed, eg "45" ÷ 3 (= 15 (m^2))	
		P1	for process to find amount of seed needed, eg "140" ÷ "45" × 3 (= 9.3...kg) **or** "140" ÷ "45" × "1.5" (= 4.6...(boxes)) oe **or** "15" × 2 (= 30 (m^2 per box)) **and** "140" ÷ "30" (= 4.6...(boxes)) **or** for process to find area that can be seeded, eg "10" ÷ 3 × "45" (= 150 (m^2)) **or** "140" ÷ "10" (= 14 (m^2)) oe	Accept 9.4 Accept 4.7
		C1	for "Yes" supported by correct figures eg 4.6...(and 5), **or** 9.3...and 10 **or** 150 and 140 (or 140 to 148.5) **or** 15 and 14	
(b)	Yes, (does not have enough) (supported)	C1	for reasoning supported with correct figures, eg does not have enough seed and compares 9 (kg) with 9.3…(kg) or 4.5 (boxes) with 4.6… (boxes) or 135 (m^2) with 140 (m^2) ft from (a)	Values used in (a) do not need repeating in (b) as long as intention is clear

(**Q04 1MA1/3H, Nov 2020**)

Q33.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	Yes (supported)	P1	for start of process, eg 5×9 (= 45) **or** 10×14 (= 140) **or** 5×2 (= 10 (kg)) **or** $3 \div 2$ (= 1.5 (boxes))	Accept values rounded or truncated to 1dp in both (a) and (b). Ignore units
		P1	for process using ratio of areas, eg "140" ÷ "45" (= 3.1...) **or** for using ratio of amount of seed eg "10" ÷ 3 (= 3.3...) **or** for finding coverage for 1 kg of grass seed, eg "45" ÷ 3 (=15 (m^2))	
		P1	for process to find amount of seed needed, eg "140" ÷ "45" × 3 (= 9.3...kg) **or** "140" ÷ "45" × "1.5" (= 4.6...(boxes)) oe **or** "15" × 2 (= 30 (m^2 per box)) **and** "140" ÷ "30" (= 4.6...(boxes)) **or** for process to find area that can be seeded, eg "10" ÷ 3 × "45" (= 150 (m^2)) **or** "140" ÷ "10" (= 14 (m^2)) oe	Accept 9.4 Accept 4.7
		C1	for "Yes" supported by correct figures eg 4.6...(and 5), **or** 9.3...and 10 **or** 150 and 140 (or 140 to 148.5) **or** 15 and 14	
(b)	Yes, (does not have enough) (supported)	C1	for reasoning supported with correct figures, eg does not have enough seed and compares 9 (kg) with 9.3…(kg) or 4.5 (boxes) with 4.6… (boxes) or 135 (m^2) with 140 (m^2) or 14 (m^2) with 15 (m^2) ft from (a)	Values used in (a) do not need repeating in (b) as long as intention is clear

(**Q26 1MA1/3F, Nov 2020**)

Q34.

Question	Working	Answer	Mark	Notes
		2.676	M1	for method to find total weight of at least 4 items, e.g. $2 \times 120 + 2 \times 524 + 474 + 86 + 214 + 339 + 275$
			B1	for change in units, e.g. $2676 \div 1000$
			A1	cao

(**Q07 1MA1/2F/M3, Specimen papers**)

Q35.

Question	Answer	Mark	Mark scheme	Additional guidance
	400	P1	for finding the total weight of 4 blocks, eg 650 × 4 (= 2600) or 0.65 × 4 (= 2.6) **or** for using 1 kg = 1000g eg 650 ÷ 1000 (= 0.65) or 3 × 1000 (= 3000)	Writing 1kg as 1000g is insufficient without it being used in a calculation
		P1	for subtraction, eg. 3 × 1000 – "2600" or 3 – "2.6" (= 0.4)	
		A1	cao SC B1 for 2350	

(**Q08 1MA1/1F, Nov 2019**)

Q36.

Question	Answer	Mark	Mark scheme	Additional guidance
	14	P1	for making a start to the process eg 14 × 15 (= 210) **or** 14 × 15 × 6.50 (= 1365) **or** 1274 ÷ 6.50 (= 196) **or** 14 × 15 × 6.50 – 1274 (= 91)	
		P1	for a complete process eg (14 × 15 × 6.50 – 1274) ÷ 6.50 **or** 14 × 15 – (1274 ÷ 6.50)	
		A1	cao	

(**Q06 1MA1/2F, Nov 2019**)

Q37.

Question	Answer	Mark	Mark scheme	Additional guidance
	40 litres (supported)	P1	for finding a cost linked to the correct volume for one offer eg 120 litres = 3 × 3.50 (= (£)10.5(0)) **or** 120 litres = (£)9 **OR** for finding cost per litre or litres per £ for one offer eg 3.50 ÷ 40 (= 0.0875) **or** 9 ÷ 120 (= 0.075) **or** 40 ÷ 3.50 (= 11.4…) **or** 120 ÷ 9 (= 13.3…) **OR** for working with bags in the ratio 2 : 1	120 *l* £10.50 £9 80 *l* £7 £6 40 *l* £3.50 £3 20 *l* £1.75 £1.50
		P1	for finding costs linked to the same volume for both offers eg 120 litres = 3 × 3.50 (= (£)10.5(0)) **and** 120 litres = (£)9 **OR** for finding cost per litre or litres per £ for both offers eg 3.50 ÷ 40 (= 0.0875) **and** 9 ÷ 120 (= 0.075) **or** 40 ÷ 3.50 (= 11.4…) **and** 120 ÷ 9 (= 13.3…) **OR** for a complete process to inform decision	
		C1	'40 litre bags' supported by correct comparable values	Clear indication that the 40 litre bags are better value for money supported by correct values for comparison

(**Q14 1MA1/2F, Nov 2019**)

Q38.

Question	Answer	Mark	Mark scheme	Additional guidance
	682	M1	for a start to a method, eg. 8184 ÷ 12 (or 818.4 ÷ 1.2) that leads to 6 as the first digit	A start to a repeated subtraction method or build-up method is acceptable if a correct first digit of 6 is found
		A1	**or** for a complete method with no more than one arithmetic error	
		A1	for digits 682	
			(ft) (dep M1) for correct placement of the decimal point into their final answer	

(**Q18 1MA1/1F, Nov 2024**)

Q39.

Question	Answer	Mark	Mark scheme	Additional guidance
	682	M1	for a start to a method, eg. 8184 ÷ 12 (or 818.4 ÷ 1.2) that leads to 6 as the first digit **or** for a complete method with no more than one arithmetic error	A start to a repeated subtraction method or build-up method is acceptable if a correct first digit of 6 is found
		A1	for digits 682	
		A1	(ft) (dep M1) for correct placement of the decimal point into their final answer	

(**Q01 1MA1/1H, Nov 2024**)

Q40.

Question	Answer	Mark	Mark scheme	Additional guidance
	660	P1	for a process to work out the **number** of large marbles eg 12 ÷ 4 (=3) **or** the **number** of small marbles eg 12 – [number of large marbles] **or** 12 × (1− ¼) (=9)	[number of large marbles] could come from an incorrect method for finding $\frac{1}{4}$ of 12
		P1	(dep) for a process to work out the **weight** of large marbles eg "3" × 70 (=210) **or** to work out the **weight** of small marbles eg "9" × 50 (=450)	
		P1	for a complete process eg (12÷4) × 70 + 12 × (1− ¼) × 50 oe	
		A1	cao	

(**Q10 1MA1/1F, Nov 2020**)

Q41.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	22	B1	cao	
(b)	8	B1	cao	
(c)	7 × (2 + 3) = 35	B1	for correct placement of brackets	Allow alternative correct statements, eg [7 × (2 + 3)] = 35

(**Q05 1MA1/1F, Nov 2018**)

Q42.

Question	Answer	Mark	Mark scheme	Additional guidance
	2300	P1	for converting to millilitres or litres eg 3 × 1000 (= 3000) **or** 700 ÷ 1000 (= 0.7)	Process marks may be awarded in either order
		P1	for finding the difference eg [3000] – 700 **or** 3 – [0.7] (= 2.3)	[3000] comes from 3 × 1000 or can be 30 or 300 or 30000 [0.7] comes from 700 ÷ 1000 or can be 7 or 70
		A1	accept 2.3 litres	

(**Q06 1MA1/1F, Nov 2023**)

Q43.

Question	Answer	Mark	Mark scheme	Additional guidance
	1635	P1	for process to find length of time in car park eg 8.40 ÷ 0.024 (= 350) **or** 0.024 × 60 (= 1.44) **and** 8.40 ÷ "1.44" (= 5.833...)	
		P1	for process to add "350" minutes to 10 45 eg 10 45 + 60 + 60 + 60 + 60 + 60 + 50 **or** 10 45 + "5 hours 50 minutes" **OR** for 435	Do not accept incorrect interpretation of time, eg 5.83 = 5 hours 83 minutes
		A1	for 1635 **or** 435 pm	Accept 1635 pm

(**Q10 1MA1/2F, Nov 2019**)

Q44.

Question	Answer	Mark	Mark scheme	Additional guidance
	78	P1	for process to find the number of boxes, eg 200 ÷ 25 (=8) or to find the cost of each tile, eg 9.75 ÷ 25 (=0.39)	Could work in £ or in pence for P marks
		P1	for complete process, eg "8" × 9.75, "0.39" × 200	
		A1	cao	

(**Q08 1MA1/3F, Nov 2020**)

Q45.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	shop A from correct figures	P1	for start of process to find the number of packs needed from at least one shop, eg 30 ÷ 4 (= 7.5 or 8) **or** 30 ÷ 6 (= 5)	
		P1	for process to find cost of batteries from at least one shop, eg (30 ÷ 4) × 1.6 (= 12.8 or 12) **or** (30 ÷ 6) × 2.7 (= 13.5)	
		P1	for a complete process to find the cost of batteries from both shops using whole packs eg "8" × 1.6 (= 12.8) **and** "5" × 2.7 (= 13.5)	"8" must come from "7.5" rounded up
		C1	for shop A with both 12.8(0) and 13.5(0)	
(b)	No effect (supported)	C1	(ft) for "has no effect" with reason **Acceptable examples** No, since A is 12 and B is 13.5(0) No, since A is just 80(p) less and B is the same. No, since A is less and B has not changed. No, since A is 1.5(0) less No, since 40(p) is less than 45(p) No, as batteries in B are 5p more **Not acceptable examples** Yes …. There is no change (unsupported) No, since A is less (incomplete)	If figures are given as part of the answer they must be correct

(**Q15 1MA1/3F, Nov 2020**)

Q46.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	600	P1	for starting process to calculate amount of flour eg 60 ÷ 15 (= 4) **or** 3 × 50 (= 150)	4 implied by 200g of sugar
		P1	for complete process eg $\frac{60}{15} \times$ "150"	
		A1	cao	
(b)	2	P1	for process to calculate amount of butter eg $\frac{60}{15} \times 2 \times 50$ (= 400)	
			OR for process to calculate the number of packs of butter needed eg [butter] ÷ 250	[butter] must be clearly stated or calculated, may be seen in part (a)
		A1	cao	2 must not come from incorrect working

(**Q23 1MA1/1F, June 2019**)

Q47.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	600	P1	for starting process to calculate amount of flour eg 60 ÷ 15 (= 4) **or** 3 × 50 (= 150)	4 implied by 200g of sugar
		P1	for complete process eg $\frac{60}{15} \times$ "150"	
		A1	cao	
(b)	2	P1	for process to calculate amount of butter eg $\frac{60}{15} \times 2 \times 50$ (= 400)	
			OR for process to calculate the number of packs of butter needed eg [butter] ÷ 250	[butter] must be clearly stated or calculated, may be seen in part (a)
		A1	cao	2 must not come from incorrect working

(**Q02 1MA1/1H, June 2019**)

Q48.

Question	Answer	Mark	Mark scheme	Additional guidance
	7	P1	for 750 × 9 (=6750)	
			or 1 + 9 (=10)	
			or 750 ÷ 1000 (= 0.75)	
		P1	(dep) for "6750" + 750 (=7500)	
			or for "10" × 750 (=7500)	
			or "0.75" × "1 + 9" (= 7.5)	
		A1	cao	
			Alternative	
		P1	for 100 + 900 (= 1000)	This can be implied by (1 litre of drink =) 100 (ml) of squash and 900 (ml of water)
		P1	(dep) for 750 ÷ 100 (= 7.5)	
		A1	cao	

(**Q15 1MA1/1F, Nov 2020**)

Q49.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	157.668(255)	M1	for 836.4 **or** 5.304(809139) **or** 28.141 **or** a truncated or rounded version of 157.668255 to no less than 3 sf	
		A1	for 157.668(255)	Answer must be given to at least 3 decimal places rounded or truncated Accept a clear indication of the decimal point. Check first 3 decimal places only
(b)	157.7	B1	ft from part (a) provided answer to (a) has at least 5 sf	

(**Q02 1MA1/3H, Nov 2019**)

Q50.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	248	P1	for 700 – 452	
		A1	cao	
(b)	11000	P1	for evidence of rounding values to 1 significant figure, eg 300 **or** 400 **or** 10 or 9 **or** 20	
		P1	(dep on P1) for beginning a process to work with ticket sales, eg. 300 × 10 (= 3000) or 290 × 10 (= 2900) or 297 × 10 (= 2970) or 300 × 9 (= 2700) or 300 × 9.5 (= 2850) or 290 × 9 (= 2610) or 297 × 9 (= 2673) **OR** 400 × 20 (= 8000) or 390 × 20 (= 7800) or 399 × 20 (= 7980) or 400 × 19.5 (= 7800) or 400 × 19 (= 7600)	Note: **not** 290 × 9.5 (= 2755) or 297 × 9.5 (= 2821.5) Note: **not** 390 × 19 (= 7410) or 390 × 19.5 (= 7605) or 399 × 19 (= 7581) or 399 × 19.5 (= 7780.5)
		A1	for using **correct** values giving an answer in the range 10 200 to 11 000 from calculations using their rounded values	Award 0 marks for an answer in the range with no supportive working
(c)	Overestimate with reason	C1	(dep on P2 in (b)) for overestimate and reason, eg (ft from (b)) true total amount of money paid will be less as all values were rounded up	Must relate to estimation and not to rounding of their final answer and they must have a final answer to part (b)

(**Q11 1MA1/1F, June 2023**)

Q51.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	Yes (supported)	P1	for a process to find the area of one shape, eg 10×8 (= 80) **or** 10×5 (= 50) **or** 8×6 (= 48) **or** $(10 - 6) \times 5$ (= 20) **or** $(10 - 6) \times (8 - 5)$ (= 12) **or** $6 \times (8 - 5)$ (= 18) **or** 5×6 (= 30)	Do not award this mark if they go on to multiply by a third length
		P1	for a complete process to find the total area, eg "80" – "12" (= 68) or "50" + "18" (= 68) or "48" + "20" (= 68)	
		P1	for a complete process to find the area covered by 3 tins eg $3 \times 2.5 \times 10$ (= 75) **or** for a complete process to find the number of litres needed eg "68" ÷ 10 (= 6.8) or [area] ÷ 10 **or** for a complete process to find the number of tins needed eg "68" ÷ 10 ÷ 2.5 (= 2.72) or [area] ÷ 10 ÷ 2.5	[area] is what they believe to be the area
		A1	for 'Yes' supported by correct figures eg 68 (m^2) **and** 75 (m^2) **or** 6.8 (litres) **and** 7.5 (litres) **or** 68 (m^2) **and** 2.72 (tins needed)	Ignore incorrect amount of paint left over if correct figures seen.
(b)	No effect (supported)	C1	ft from (a) for "has no effect" with reason **Acceptable examples** No effect, she will need less paint It won't change, she will still have enough No, she will have more paint left over No, as this will cover 82.5m^2	Must have a decision in (a). Must include a decision eg yes / no / no effect. If figures included in the statement they must be correct for their [area] in (a).
			Not acceptable examples Petra will need less paint She will have more paint left over She won't have enough paint She will need more paint	

(**Q22 1MA1/1F, June 2024**)

Q52.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	Yes (supported)	P1	for a process to find the area of one shape, eg 10×8 (= 80) **or** 10×5 (= 50) **or** 8×6 (= 48) **or** $(10 - 6) \times 5$ (= 20) **or** $(10 - 6) \times (8 - 5)$ (= 12) **or** $6 \times (8 - 5)$ (= 18) **or** 5×6 (= 30)	Do not award this mark if they go on to multiply by a third length
		P1	for a complete process to find the total area, eg "80" – "12" (= 68) or "50" + "18" (= 68) or "48" + "20" (= 68)	
		P1	for a complete process to find the area covered by 3 tins eg $3 \times 2.5 \times 10$ (= 75) **or** for a complete process to find the number of litres needed eg "68" ÷ 10 (= 6.8) or [area] ÷ 10 **or** for a complete process to find the number of tins needed eg "68" ÷ 10 ÷ 2.5 (= 2.72) or [area] ÷ 10 ÷ 2.5	[area] is what they believe to be the area
		A1	for 'Yes' supported by correct figures eg 68 (m^2) **and** 75 (m^2) **or** 6.8 (litres) **and** 7.5 (litres) **or** 68 (m^2) **and** 2.72 (tins needed)	Ignore incorrect amount of paint left over if correct figures seen
(b)	No effect (supported)	C1	ft from (a) for "has no effect" with reason **Acceptable examples** No effect, she will need less paint It won't change, she will still have enough No, she will have more paint left over No, as this will cover 82.5m^2	Must have a decision in (a) Must include a decision eg yes / no / no effect If figures included in the statement they must be correct for their [area] in (a)
			Not acceptable examples Petra will need less paint She will have more paint left over She won't have enough paint She will need more paint	

(**Q03 1MA1/1H, June 2024**)

Q53.

Question	Answer	Mark	Mark scheme	Additional guidance
	5	P1	for process to work in consistent units, eg 12 × 1000 (= 12000) **or** 105 ÷ 1000 (= 0.105)	May be seen in subsequent calculations
		P1	for process to work with portion size, eg 105 × 3 (= 315) **OR** 12 ÷ [0.105] (= 114.285…)	For [0.105] allow use of 0.105, 1.05 or 10.5
		P1	for process to work with weight of food per week or number of days, eg "315" × 7 (= 2205) **or** "315" × 5 (= 1575) **or** "315" × 6 (= 1890) [12000] ÷ "315" (=38(.095…)) **OR** [114.285…] ÷ 3 (= 38(.095…)) or [114.285…] ÷ 7 (= 16.3…)	For [12000] accept use of 12000, 1200 or 120 For [114.285] allow continued use of incorrectly converted figure from previous mark.
		P1	(dep P2) for process to find number of weeks, eg "12000" ÷ "2205" (= 5.4…) **OR** "38.095…" ÷ 7 (= 5.4…) **OR** "16.3…" ÷ 3 (= 5.4…) **OR** "2205" × 5 (= 11025) **or** "2205" × 6 (= 13230) **OR** 975 **or** -1230	
		A1	cao	If a correct answer is given without supportive working award 0 marks.

(**Q09 1MA1/3F, Nov 2023**)

Q54.

Question	Answer	Mark	Mark scheme	Additional guidance
	56.4	M1	for a start to a method, eg $846 \div 15$ or $8.46 \div 0.15$ or $8.46 \div 3 \times 20$ or $282 \div 5$ that leads to 5 as the first digit. **or** for a complete method with no more than one arithmetic error.	A start to a repeated subtraction method or a build-up method is acceptable if a correct first digit of 5 is found
		A1	for digits 564 identified	
		A1	(ft) dep on M1 for correct placement of the decimal point into their final answer	An answer of $56\frac{2}{5}$ gets 3 marks

(**Q20 1MA1/1F, June 2023**)

Q55.

Question	Answer	Mark	Mark scheme	Additional guidance
	56.4	M1	for a start to a method, eg $846 \div 15$ or $8.46 \div 0.15$ or $8.46 \div 3 \times 20$ or $282 \div 5$ that leads to 5 as the first digit **or** for a complete method with no more than one arithmetic error	A start to a repeated subtraction method or a build-up method is acceptable if a correct first digit of 5 is found
		A1	for digits 564 identified	
		A1	(ft) dep on M1 for correct placement of the decimal point into their final answer	An answer of $56\frac{2}{5}$ gets 3 marks

(**Q01 1MA1/1H, June 2023**)

Q56.

Question	Answer	Mark	Mark scheme	Additional guidance
(i)	43.7	B1	cao	
(ii)	$\frac{5}{7}$	B1	$\frac{5}{7}$ oe	Accept any other equivalent fraction to $\frac{5}{7}$

(**Q01 1MA1/3F, Nov 2018**)

Q57.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	241.56	P1	for difference for 1 parcel eg 35.38 – 15.25 (= 20.13) **OR** for total cost for 12 parcels by either service eg 35.38 × 12 (= 424.56) **or** 15.25 × 12 (= 183)	
		P1	for a complete process eg "20.13" × 12 **or** "424.56" – "183"	
		A1	cao	
(b)	Explanation	C1	for explanation **Acceptable examples** both figures rounded down (refers to both figures) 20 is less than 21 and 15 is less than 15.25 **Not acceptable examples** both figures rounded (up); rounded down either 20 is less than 21 or 15 is less than 15.25 (refers to just one figure) the cost is 320.25 (more than 300); multiplying with bigger numbers	

(**Q11 1MA1/3F, June 2019**)

Q58.

Question	Answer	Mark	Mark scheme	Additional guidance
	280	P1	for process to find the number of bars of white chocolate or milk chocolate, eg 24 ÷ 3 × 2 oe (= 16) or 24 ÷ 3 (= 8) **or** for process to work with total weight of chocolate, eg 24 × 35 (= 840)	Allow use of 0.66.. or better **or** 0.33.. or better for both process marks
		P1	for complete process, eg (24 – "16") × 35 or "8" × 35 **or** "840" ÷ 3	Award P2 for an answer of 560
		A1	cao	

(**Q12 1MA1/2F, June 2024**)

Q59.

Question	Answer	Mark	Mark scheme	Additional guidance
	Shown	M1	for a method to find the total cost for footballs, hockey sticks or cricket bats, eg 9.5 × 5 (= 47.5) **or** (6 ÷2) × 30 (= 90) **or** 23 × 2 (= 46) **OR** begins to work with budget, eg 200 – 5 (= 195)	Can be done with addition or subtraction, or combination
		M1	for a method to find the total cost for two of footballs, hockey sticks or cricket bats, eg two from 9.5 × 5 (= 47.5) **or** (6 ÷2) × 30 (= 90) **or** 23 × 2 (= 46) **OR** works with budget **and** total cost for one of footballs, hockey sticks or cricket bats, eg 200 – "47.5"	
		M1	for a complete method to find comparable figures, eg 9.5 × 5 + (6 ÷2) × 30 + 23 × 2 + 5 or "47.5" + "90" + "46" + 5 or 200 – (9.5 × 5 + (6 ÷2) × 30 + 23 × 2 + 5) or 200 – "188.5"	
		C1	shows correct figures for a conclusion eg (£)188.5(0) **or** (£)11.5(0)	Figures need not be supported by words but must not be contradicted.

(**Q08 1MA1/2F, Nov 2023**)

Q60.

Question	Answer	Mark	Mark scheme	Additional guidance
	6.95 **or** (2kg flour =) 2.70 **and** (5 kg sugar =) 4.25	P1	for process to find the cost of 1kg of flour, eg 4.05 ÷ 3 (= 1.35)	May be implied by (2 kg =) 2.70 May be implied by (1 kg =) 0.85 oe
		P1	for process to work with cost of sugar, eg 11.85 – 5 × "1.35" (= 5.10)	
		P1	for process to find cost for 5kg of sugar, eg "5.10" ÷ 6 × 5(= 4.25)	
		A1	for 6.95 **or** (2kg flour =) 2.70 **and** (5 kg sugar =) 4.25	

(**Q14 1MA1/2F, Nov 2023**)

Q61.

Question	Answer	Mark	Mark scheme	Additional guidance
	Shown	P1	for a start to process of finding the total cost, eg 5 × 26 (= 130) or 4 × 45 (= 180) or 8 × 23.50 (= 188) or 26 + 45 + 23.50 (= 94.5(0)) **or** for a start to process of finding money left after paying costs, eg 500 – 26 (= 474) or 500 – 45 (= 455) or 500 – 23.50 (= 476.5(0)) or 500 – 5 × 26 (= 370) or 500 – 4 × 45 (= 320) or 500 – 8 × 23.50 (= 312)	
		P1	for complete process, eg "130" + "180" + "188" (= 498) **or** 500 – "130" – "180" – "188" (= 2)	
		C1	Shown with a complete process and correct figures.	

(**Q09 1MA1/3F, June 2024**)

Q62.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	No from correct figures	P1	for first step in process to solve the problem, eg find cost of 3 T-shirts, 25 × 3 (= 75) **or** eg find remaining money after just one purchase, eg 200 – 60 (= 140) or 200 – 25 (= 175)	Award this mark for addition of 2 or more items or for subtraction of one item or more from 200 eg 200 – 50 (= 150) etc.
		P1	for process to find total cost of trainers and T-shirts, eg 60 + "75" (= 135) **or** find total cost including cost of jacket, eg. 60 + "75" + 80 (= 215) **or** find the change after buying all 4 items, eg. 200 – 60 – 3 × 25 (= 65) oe	
		C1	for No from correct figures **Acceptable examples** No, needs 215 No, only has 65 left No, needs 15 more **Not acceptable examples** Yes ….	Figures can be given without units ($)
(b)	Explanation	P1	for a start to a method, eg. approximating 0.749 to 0.7, 0.74, 0.75 or 0.8	
		C1	for explanation **Acceptable examples** 0.7 × 60 = 42 [is an underestimate] 0.74 × 60 = 44.4(0) [is an underestimate] **Not acceptable examples** 0.75 × 60 = 45 [is an overestimate] 0.8 × 60 = 48 [is an overestimate]	For full marks, any calculations must be correct. No statement in words is needed.

(**Q12 1MA1/1F, Nov 2019**)

Q63.

Question	Answer	Mark	Mark scheme	Additional guidance
	No (supported)	P1 P1 P1 P1 C1	for 3000 ÷ (2 + 3) (= 600) for "600" × 2 (= 1200) **or** "600" × 3 (= 1800) **or** "600" ÷ 6 (= 100) **or** "600" ÷ 20 (= 30) for "1200" ÷ 6 (= 200) **or** "1800" ÷ 20 (= 90) **or** "100" × 2 (= 200) **or** "30" × 3 (= 90) for "90" ÷ ("200" + "90") × 100 (= 31.0...) oe **or** "90" ÷ ("200" + "90") (= 0.31...) **or** 0.3 × ("200" + "90") (= 87)oe correct conclusion **and** fully correct calculations with accurate figure eg No and 87 **or** No and 31% **or** No and 0.31	 Full method to compare No working, answer only no marks No may be implied by a statement

(**Q03 1MA1/2H, Nov 2020**)

Q64.

Question	Answer	Mark	Mark scheme	Additional guidance
	No (supported)	P1 P1 P1 C1	for 3000 ÷ (2 + 3) (= 600) for "600" × 2 (= 1200) **or** "600" × 3 (= 1800) **or** "600" ÷ 6 (= 100) **or** "600" ÷ 20 (= 30) for "1200" ÷ 6 (= 200) **or** "1800" ÷ 20 (= 90) **or** "100" × 2 (= 200) **or** "30" × 3 (= 90) for "90" ÷ ("200" + "90") × 100 (= 31.0...) oe **or** "90" ÷ ("200" + "90") (= 0.31...) **or** 0.3 × ("200" + "90") (= 87)oe correct conclusion **and** fully correct calculations with accurate figure eg No and 87 **or** No and 31% **or** No and 0.31	 Full method to compare No may be implied by a statement No working, answer only no marks

(**Q23 1MA1/2F, Nov 2020**)

Q65.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	5	P1	for finding the number of oranges required eg $8 \div 2 \times 30$ (=120) oe **or** for finding the number of oranges left from use of at least 2 boxes eg $24 \times 2 - 30$ (=18) or $24 \times 4 - 90$ (=6) **or** finds the correct amount of juice possible : from at least two boxes eg 24 + 24 is 2 litres or 24 + 24 + 24 is 4 litres	A build up method with no process shown must use fully correct figures
		P1	for a complete process eg "120" ÷ 24 (=5) oe **or** 30 + 30 + 30 + 30 (=120) **and** 24 + 24 + 24 + 24 + 24 (=120) **or** $24 \times 2 - 30 = 18$, 18 + 24 = 42, 42 – 30 = 12, 12 + 24 =36, 36 – 30=6, 6 + 24 = 30	May be seen as a mixture of repeated subtraction and addition
		A1	cao with no arithmetic errors seen SCB1 for an answer of 10 supported by working	This mark cannot be awarded if the supporting work has an arithmetic error An answer only and no working is no marks
(b)	9 : 2	M1	for a partially simplified correct ratio eg 126 : 28 or any other equivalent ratio **or** 2 : 9	eg 630:140, 315:70, 63: 14 180:40, 90:20, 45:10, 4.5:1
		A1	cao	

(**Q17 1MA1/2F, Nov 2020**)

Q66.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	3	B1	cao	
(b)	32	B1	cao	
(c)	30 ÷ (3 + 2) – 4	B1	for brackets correctly placed	

(**Q11 1MA1/1F, June 2024**)

Q67.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	0.517(01897 59)	M1	for any correct partial calculation, eg 40.113 or 6.333(482454) or 12.25 **or** answer of 0.51 or 0.52 **or** digits 517…	
		A1	for 0.517(…)	Answer must be given to at least 3 decimal places rounded or truncated. Check first 3 significant figures only.
(b)	0.52	B1	for 0.52 **or** ft their answer to part (a) correctly rounded to 2 sf, provided part (a) has at least 3 sf	Do not accept trailing 0, eg 0.520

(Q19 1MA1/2F, June 2024)

Q68.

Question	Working	Answer	Mark	Notes
		$\frac{7}{12}$	M1	for 40 + 50 + 60 (= 150) or 360 – 40 – 50 – 60 (= 210)
			M1	for $1-\frac{\text{“150”}}{360}$ $(=\frac{210}{360})$ or $\frac{\text{“210”}}{360}$
			A1	for $\frac{7}{12}$

(Q15 1MA1/1F/M3, Specimen papers)

Q69.

Question	Working	Answer	Mark	Notes
		Steve with correct figures	P1	for a process to find the number of green apples for one person, e.g. 264 ÷ 6 (= 44) **or** 0.28 × 150 (= 42) **or** 0.15 × 340 (= 51)
			P1	for a process that would lead to the number of green apples for two people, e.g. two of: 264 ÷ 6 (= 44) **or** 0.28 × 150 (= 42) **or** 0.15 × 340 (= 51)
			P1	for a process that would lead to the number of green apples for all three people, e.g. 264 ÷ 6 (= 44) **and** 0.28 × 150 (= 42) **and** 0.15 × 340 (= 51)
			C1	44, 42, 51 with a correct conclusion

(Q07 1MA1/3F/M3, Specimen papers)

Q70.

Question	Working	Answer	Mark	Notes
	172 34 5160 688+ 1 7 2 0/3 2/1 0/6 3 0/4 2/8 0/8 4 100 70 2 30 3000 2100 60 4 400 280 8 = 3000 + 2100 + 60 + 400 + 280 + 8	5848	M1 M1 A1	for complete method with relative place value correct (addition not necessary) for addition of all appropriate elements cao

(**Q14 1MA1/1F/M3, Specimen papers**)

Q71.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	25	B1	for 25, accept answer in range 24 to 26	
(b)	24	M1 A1	for 40 ÷ 10 × 6 cao	
(c)	Comment	C1	(dep B1 or M1) ft for comment for their results, eg the two answers are answer to (a) **or** the rule gives a quite close **or** answer to (b) is less than smaller answer	

(**Q09 1MA1/2F, Nov 2020**)

Q72.

Question	Answer	Mark	Mark scheme	Additional guidance
	1.3	M1	for working with boxes or bags eg 600 ÷ 120 (= 5) or 1000 ÷ 270 (= 3.7(037..)) 6 ÷ 120 (=0.05) or 10 ÷ 270 (= 0.037(037..))	Cost ÷ quantity For the M marks allow working in £ instead of p.
		M1	for working with bags and boxes where they are working to the same quantities of boxes and bags eg 600 ÷ 120 (= 5) **and** 1000 ÷ 270 (= 3.7(037..)) 6 ÷ 120 (=0.05) **and** 10 ÷ 270 (= 0.037(037..))	Other values are possible where they are using alternative quantities of boxes and bags, but these must be the same quantities of each.
		M1	for finding the difference eg "5" – "3.7(037..)" (= 1.29.. to 1.3) or "0.05" – "0.037(037..))" (= 0.0129.. to 0.013)	Must have consistent units for this mark.
		A1	for answer in the range 1.29 to 1.3	If an answer is given in the range in working and then rounded incorrectly award full marks.

(**Q14 1MA1/3F, June 2023**)

Q73.

Question	Working	Answer	Mark	Notes
		19.45	M1 A1	for a method to carry out the multiplication of 3.89×5 oe or $4 \times 5 - 0.11 \times 5$ oe or digits 1945 seen cao

(**Q07 1MA1/1F/M3, Specimen papers**)

Q74.

Question	Working	Answer	Mark	Notes
		No (supported)	P1 P1 C1	for a start to the process to work out the sum of costs of articles to buy, e.g. 1.60×2 (= 3.20) or 2.25 + 1.85 + 3.30 (= 7.40) or starts to subtract from £10 for a complete process to work out the sum of costs of articles to buy, e.g. 1.60×2 (= 3.20) + 2.25 + 1.85 + 3.30 (= 10.60) or subtraction of all costs from £10 for correct conclusion with supporting figures e.g. (£)10.60 or 60p short

(**Q09 1MA1/1F/M3, Specimen papers**)

Q75.

Question	Working	Answer	Mark	Notes
		334.4(0)	P1 P1 A1	for process to find 12% of 5700 **or** 88% of 5700, e.g. 0.12×5700 (= 684) **or** 0.88×5700 (= 5016) (dep on P1) for a complete process to find the value of each payment, e.g. (5700 – "684") ÷ 15 or "5016" ÷ 15 cao; condone missing 0

(**Q18 1MA1/3F/M3, Specimen papers**)

Q76.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	45	P1	for a valid start to the process, eg 180 ÷ 12 (= 15) or 3(.00) ÷ 12 (= 0.25)	Calculations can be in £ or p or a combination for both process marks
		P1	for complete process, eg "15" × 3(.00) or 180 × "0.25"	
		A1	for 45(.00)	
(b)	9	P1	for a valid start to the process, eg cost of each can, eg 7(.00) ÷ 24 (= 0.2916...) or 700 ÷ 24 (= 29.16...) **or** total volume of 24 cans, eg 330 × 24 (= 7920) **or** proportion of m*l*, eg 330 ÷ 100 (= 3.3)	Calculations can be in £ or p
		P1	for complete process, eg $\frac{100}{330}$ × "0. 2916..." (= 0.08838...) or $\frac{100}{330}$ × "29.16..." (= 8.838...) **or** $\frac{100}{\text{"7920"}}$ × 7(.00) (= 0.08838...) or 7(.00) ÷ 24 ÷ $\frac{330}{100}$ (= 0.08838...) or 7(.00) ÷ $\frac{\text{"7920"}}{100}$ (= 0.08838...)	
		A1	for 9	Accept £0.09(p)

(**Q18 1MA1/2F, June 2023**)

Q77.

Question	Working	Answer	Mark	Notes
(a)		19.0$\dot{6}$	M1	for 7.84 **or** 12.2 **or** 1.38
			A1	for 19.066 (66666…) or 19.06 with some indication that the 6 is recurring
(b)		19.1	B1	ft from part (a) providing to at least 2 decimal places

(**Q15 1MA1/3F/M3, Specimen papers**)

Q78.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	157.668(255)	M1	for 836.4 **or** 5.304(809139) **or** 28.141 **or** a truncated or rounded version of 157.668255 to no less than 3 sf	
		A1	for 157.668(255)	Answer must be given to at least 3 decimal places rounded or truncated Accept a clear indication of the decimal point. Check first 3 decimal places only
(b)	157.7	B1	ft from part (a) provided answer to (a) has at least 5 sf	

(**Q23 1MA1/3F, Nov 2019**)

Q79.

Question		Working	Answer	Mark	Notes
	(a)		Explanation	1	C1 34 is not a multiple of 3 oe
	(b)		Explanation	2	C1 explains order of operations not correct oe C1 explains inverse of ×2 not used oe

(**Q11 1MA1/2F/M1, Specimen papers**)