Mark Scheme

Q1.

Question	Answer	Mark	Mark scheme	Additional guidance
	500	B1	cao	

(Q01 1MA1/3F, June 2019)

Q2.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	75 to 81	B2	for answer in the range 75 to 81	
		(B1	for 60 **or** 100 **or** 6000 **or** 6400 **or** $\sqrt{64\times100}$)	
(b)	0.000 148	B1	for 0.000 148 oe	Can use standard form
(c)	$\frac{1}{25}$	B1	for $\frac{1}{25}$ or 0.04	

(Q08 1MA1/1H, June 2019)

Q3.

Question	Answer	Mark	Mark scheme	Additional guidance
	0.319	M1	for partial method eg 1.70(499…) or 16.74 or $\frac{837}{50}$ or 0.101(8516...) or 0.102 or 0.32	
		A1	for 0.319(1419…)	Accept 0.319 or better. Condone incorrect digits after the 0.319; incorrect rounding if 0.319(1419…) is shown in working.

(Q07 1MA1/3H, June 2019)

Q4.

Question	Answer	Mark	Mark scheme	Additional guidance
	1480	B1	cao	

(Q01 1MA1/2F, June 2022)

Q5.

Question	Answer	Mark	Mark scheme	Additional guidance
	0.739	M1	for partial evaluation, eg 6.07(5732...) **or** $\sqrt{7.2}$ (= 2.68(328...)) **or** 7.80(778…) **or** $\sqrt[3]{7.80(7782818...)}$ (= 1.98(3851871…))	
		A1	for an answer in the range 0.739 to 0.747	If an answer is given in the range in working and then rounded incorrectly award full marks.

(**Q08 1MA1/2H, June 2022**)

Q6.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	2500	B1	cao	
(b)	0.09	B1	cao	

(**Q18 1MA1/3F, June 2022**)

Q7.

Question	Answer	Mark	Mark scheme	Additional guidance
	8000	B1	cao	

(**Q04 1MA1/1F, Nov 2018**)

Q8.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	7360	B1	cao	
(b)	0.1077981356	B2	for 0.1077(981…)	Answer must be given to at least 4 decimal places rounded or truncated
		(B1	for 5.74(45626…) **or** 53.29 **or** 0.11 **or** 0.107 **or** 0.108)	Accept a clear indication of the decimal point. Check first four decimal places only

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

Q9.

Question	Answer	Mark	Mark scheme	Additional guidance
	5	B1	cao	

(Q03 1MA1/1F, Nov 2020)

Q10.

Question	Answer	Mark	Mark scheme	Additional guidance
	4550 to 4800	M1	for rounding at least two figures to 800, 50, 300 or 290 (which could be evidenced through partial calculation)	Any attempt to find the exact answer gets NO marks even if followed by rounding
		M1	(dep) for a correct calculation using their rounded values eg. sight of 240000 (= 800 × 300) **or** 232000 (= 800 × 290) **or** 229100 (= 790 × 290) **or** 16 (= 800 ÷ 50) **or** 15.8 = (790 ÷ 50) **or** 6 (= 300 ÷ 50) **or** 5.8 = (290 ÷ 50)	Various operations possible
		A1	for answer in range 4550 to 4800	

(Q18 1MA1/1F, Nov 2020)

Q11.

Question	Answer	Mark	Mark scheme	Additional guidance
	29 000	B1	cao	

(Q02 1MA1/2F, Nov 2020)

Q12.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	3.0×10^9	P1	for correct process, eg $10^5 \times 365 \times 81$ or for a correct answer not written in standard form, eg 2956500000 or $2.9(565) \times 10^n$ where $n \neq 9$ oe	Values may be rounded. Allow 350, 360, 366, 370, 400 and 80, 100
		A1	for an answer in the range 2.8×10^9 to 4.0×10^9	
(b)	4.5×10^{-11}	P1	for correct process, eg $\frac{90}{2 \times 10^{12}}$ **or** for correct answer not written in standard form, eg 45×10^{-12} or 0.45×10^{-10} **or** 4.5×10^n where $n \neq -11$	Allow $90 \div 2 \times 10^{12}$
		A1	cao	

(Q10 1MA1/3H, Nov 2020)

Q13.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	16 to 20	P1	for using time = $\frac{\text{distance}}{\text{speed}}$, eg $\frac{1}{200}$ or $\frac{1}{213}$ or for 1 hour = 60 × 60 (= 3600) seconds	
		P1	complete process, eg $\frac{1}{200} \times 60 \times 60$ oe or $\frac{1}{213} \times 60 \times 60$	Calculation could be done in stages.
		A1	for answer in range 16 to 20	
(b)	decision with reason	C1	(dep on correct use of time = $\frac{\text{distance}}{\text{speed}}$) for reason related to their response to part(a), eg overestimate as speed rounded down	

(**Q24 1MA1/1F, Nov 2018**)

Q14.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	1.844977205	M1	for 3.403(940887) or 3.717(526059) or 2.014(944168) or 1.84(...) or 1.8(...)	Accept consistent use of a comma to indicate a decimal point
		A1	for 1.844(977205)	Answer must be given to at least 3 decimal places rounded or truncated
(b)	1.84	B1	for 1.84 or ft from (a) provided answer to (a) has at least 3 dp	

(**Q12 1MA1/2F, Nov 2021**)

Q15.

Paper 1MA1: 1H				
Question	Working	Answer		Notes
(a)		2.5×10^{24}	P1	process to estimate or divide
			P1	a complete process eg. $(1 \times 10^{3}) \div (4 \times 10^{-22})$
			A1	
(b)		Under-estimate	C1	ft from (a) Eg. under estimate as number rounded up but in denominator of fraction

(**Q11 1MA1/1H/N, Specimen papers**)

Q16.

Question	Working	Answer	Mark	Notes
(a)		Shown	M1	for distance ÷ speed to find time, e.g. $(1.496 \times 10^{11}) \div (3 \times 10^{8})$ (= 498.666)
			M1	(dep) for conversion to hours, e.g. "498.666" ÷ (60 × 60)
			A1	0.1385185185…
(b)		Explanation	C1	correct explanation, e.g. they have multiplied the indices rather than adding

(Q28 1MA1/2F/M2, Specimen papers)

Q17.

Question	Answer	Mark	Mark scheme	Additional guidance
	19	B1	cao	

(Q04 1MA1/3F, Nov 2022)

Q18.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	1.882(0861678…)	B2	1.882(0861678…)	Condone 1.882(0861668...) for both marks
		(B1	for 16.6 **or** 8.82 **or** $\frac{830}{441}$ **or** 1.88)	
(b)	1.88	B1	for 1.88 **or** ft their answer to part (a) correctly rounded to 2 dp, providing part (a) has at least 3 dp	Condone 1.88 Do not accept trailing 0, eg 1.880

(Q18 1MA1/2F, Nov 2023)

Q19.

Paper 1MA1: 1F				
Question	Working	Answer	Notes	
(a)		2000	P1	Evidence of estimate eg. 400 or 20 used in calculation
			P1	complete process to solve problem
			A1	
(b)		Overestimate with reason	C1	ft from (a) eg. overestimate as two numbers rounded up

(Q13 1MA1/1F/N, Specimen papers)

Q20.

Question	Working	Answer	Mark	Notes
(a)		6 to 8	M1	evidence of recall of area formula with correct radius e.g. $\pi \times 10^2$
			M1	calculation to find number of boxes, (area) ÷ (coverage figure)
			M1	(indep) evidence of estimation, eg π in range 3 to 3.2, or coverage figure of 40, 42, 45, 48 or 50
			A1	(dep on M3) answer in the range 6 to 8
(b)		underestimate	C1	e.g. (ft from (a)) underestimate: true area greater so could need more boxes. Must relate to estimation, not rounding of answer.

(**Q18 1MA1/1F, June 2017**)

Q21.

Question	Working	Answer	Mark	Notes
(a)		£630	P1	uses some estimation, e.g. states 90 or 700 or 800 or 100
			P1	starts process of multiplication using estimates, e.g. 90×700
			A1	cao accept 63000p
(b)		reasoning	C1	gives an answer based on their calculations, e.g. over-estimate since figures have been rounded up

(**Q12 1MA1/1F/M2, Specimen papers**)

Q22.

Question		Working	Answer	Mark	Notes
	(a)		39	3	P1 for rounding one dimension correctly P1 for $(2 \times 2) + (5 \times 7)$ with at least three of 2, 2, 5, 7 used A1 cao
	(b)		Justified answer	1	C1 ft (dep on P1) underestimate with explanation

(**Q13 1MA1/1F/M1, Specimen papers**)

Q23.

Question		Working	Answer	Mark	Notes
			600	3	(M2 for 300 ÷ 0.5 or 60 × 10 or 30 × 20) M1 for at least two of 30, 10 and 0.5 or sight of 300 or 60 or 20 A1 for 600 – 620 but not 601.1(198428…) **OR** (M2 for 310 ÷ 0.5 or 62 × 10 or 31 × 20) M1 for at least two of 31, 10 and 0.5 or sight of 310 or 62 or 20 A1 for 600 – 620 but not 601.1(198428…)

(**Q04 1MA0/1H, Nov 2012**)

Q24.

Question	Working	Answer	Notes
		4 - 4.5	B1 Rounds appropriately using two of 5, 2 or 7 M1 $\sqrt{19}$ A1 4 - 4.5

(**Q08 1MA1/1H/S2, Specimen papers**)

Q25.

Paper 1MA1: 1H			
Question	**Working**	**Answer**	**Notes**
(a)		5.7×10^{26} to 6×10^{26}	B1 uses estimates eg 1.899 to 1.9 or 2 M1 process of multiplication eg 0.57×10^{27} A1 between 5.7×10^{26} and 6×10^{26}
(b)		explanation	C1 eg underestimate a number is rounded up

(**Q08 1MA1/1H/S1, Specimen papers**)

Q26.

Paper 1MA1: 1F			
Question	**Working**	**Answer**	**Notes**
(a)		2000p-2600p	P1 Evidence of estimate eg. 4 or 50 used in calculation P1 complete process to solve problem A1 2000p-2600p or £20-£26
(b)		under	C1 underestimate as values have been rounded down

(**Q14 1MA1/1F/S1, Specimen papers**)

Q27.

Question	Working	Answer	Mark	Notes
(a)		3.5 to 4.5	M1	substitution into formula $\frac{1}{3}\pi r^2 h$ of chosen values for r and V (accept $r = 5.13$ and $V = 98$) and starts rearrangement e.g. multiplies by 3, divides by π or divides by r^2 (both sides)
			M1	uses estimates in calculation e.g. $\frac{3\times100}{3\times25}$ (or in rearranged formula) or $\frac{12}{\pi}$
			A1	arrives at a single value from estimate in the range 3.5 to 4.5
(b)		more	C1	ft e.g. more since number in numerator goes up; numbers in denominator go down.

(**Q15 1MA1/1H, June 2017**)

Q28.

Question	Working	Answer	Mark	Notes
		44 - 56	2	B2 for 44 - 56 (B1 for 1000 or 900 or 20 or 18 or 19, unless it is clear these have not come from estimation)

(**Q05 1MA0/1H, June 2016**)

Q29.

PAPER: 5MB2H 01					
Question		**Working**	**Answer**	**Mark**	**Notes**
		$\frac{90\times0.5}{5} = \frac{45}{5}$	8.9 – 9.5	2	M1 for at least two of 90, 0.5 and 5 A1 for 8.9 – 9.5

(**Q07 5MB2H/01, Nov 2013**)

Q30.

Question	Answer	Mark	Mark scheme	Additional guidance
	Estimated value	P1	for using a rounded value in a correct process eg 3000 ÷ 15 **or** 15 × 8 **or** 20 × 8	Their rounded value must be used in a calculation Rounding may appear after a correct process eg 15.12 × 8 = 120.96 ≈ 100 followed by eg 3069.25 ÷ 100
		P1	for a full process to find the number of days eg "3000" ÷ "15" ÷ "10" (= 20) **or** "3000" ÷ "15" ÷ 8 (= 25)	Accept 3069.25 ÷ 15.12 ÷ 8 oe
		A1	for a correct answer following through their rounded values	
(b)	Explanation	C1	eg less days required **or** it doesn't affect the answer because I would still round 16.27 down to 15 (or up to 20)	Refers to time taken

(**Q04 1MA1/1H, June 2018**)

Q31.

Question		Working	Answer	Mark	Notes
			2000	3	B1 for correctly rounding two of the three values (40, 100, 0.2) M1 for partially completing the calculation, e.g. (40 × 10) ÷ 0.2, 400 ÷ 0.2 A1 cao

(**Q07 1MA1/1H/M1, Specimen papers**)

Q32.

Question	Working	Answer	Mark	Notes
		270	3	M1 for correct use of formula for volume of a cylinder using exact or (some) approximate figures eg $\pi \times 31^2 \times 97.5$ or $\pi \times 31^2 \times 100$ or using an estimate of π eg $\pi = 3$ in the volume formula M1 for a complete method to find an estimate for the volume in cm^3 with at least 2 values rounded eg $\pi \times 30^2 \times 100$ (= 270 000) eg $3.1 \times 30^2 \times 100$ eg $3 \times 31^2 \times 100$ A1 accept answer in the range 270 – 300 from a method using estimates

(**Q12 1MA0/1H, June 2017**)

Q33.

Question	Answer	Mark	Mark scheme	Additional guidance
	160 to 200	M1	rounds one figure appropriately (6, 8, 0.25 or 0.3)	Do not award any marks for an accurate calculation if then rounded
		M1	(dep) for carrying out an accurate calculation using 0.25 or 0.3 eg $6 \div 0.3 = 20$, $8 \div 0.25 = 32$, $6 \div 0.25 = 24$ **or** digits 16	
		A1	Answer in the range 160 to 200 from appropriate rounding	

(Q26 1MA1/1F, Nov 2023)

Q34.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	Estimated value	P1	for using a value rounded to 1sf in a calculation eg $500 \div 10$ **or** 500×0.8 **or** 510×0.8 **or** 513×0.8 **or** 500×0.81	Their rounded value must be used in a calculation Rounding may occur after a correct process, eg $513 \div 10 = 51.3 \approx 50$ and 50×0.81 $513 \div 10 = 51.3 \approx 51$ and 51×0.8 scores P1P1 Accept 0.81 rounded to 0.80 for this mark Condone 0.81 rounded to 1 for this mark.
		P1	for a full process to find the total amount eg $500 \div 10 \times 0.8$ (= 40) **or** $510 \div 10 \times 0.8$ (= 40.8) **or** $500 \div 10 \times 0.81$ (= 40.5) or [distance] ÷ 10 × [amount] oe	Where [distance] is their rounded 513 or 513 and [amount] is their rounded 0.81 or 0.81 Accept $513 \div 10 \times 0.81$ for this mark.
		A1	for a correct answer following through their correct rounded value(s)	Do not award this mark if 0.81 is rounded to 1
(b)	underesti-mate with reason	C1	ft from (a) eg underestimate as numbers rounded down	Must relate to estimation and not rounding of their final answer and they must have a final answer to part (a)

(Q24 1MA1/1F, June 2024)

Q35.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	Estimated time	P1	for rounding of distance = 5 (miles) or speed = 30 (mph)	
		P1	(dep) for using time = distance / speed eg 5 ÷ 30 **or** for a complete process, eg 30 ÷ 60 (= 0.5) **and** 5 ÷ "0.5" or 30 ÷ 5 (= 6) **and** 60 ÷ "6" or $4.96 \times \frac{60}{30}$	
		A1	for a correct answer following through their correct rounded distance and/or speed	
(b)	Overestimate with reason	C1	ft from (a) for decision with correct reasoning, eg overestimate as dividing a larger number by a smaller number or overestimate as miles rounded up and speed rounded down	Ft the rounding and process from (a) Must relate to estimation and not rounding of their final answer and they must have a final answer to part (a)

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

Q36.

Question	Working	Answer	Mark	Notes
(a)		12 000	M1	for approximations of 40 or 300 in a product, e.g. 40 × 300 or 40 × 298 or 39 × 300
			A1	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**)

Q37.

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**)

Q38.

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**)

Q39.

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**)

Q40.

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)

Q41.

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)

Q42.

Question	Working	Answer	Mark	Notes
(a)		Explanation	C1	eg States over-estimated for both values
(b)		182.7(0)	P1	for a process to find 10% of a value stated in the question eg $\frac{10}{100}$ ×5.80 (=0.58) **or** $\frac{10}{100}$ × 35 (=3.5) oe **or** 35 × 5.80 (=203), allow 30 × 5.80 (=174) **or** 35 × [reduced price]
			P1	for a process to find 90% of a value stated in the question eg 35 – "3.5" (=31.5) **or** 0.9 × 5.80 (=5.22) oe **or** $\frac{10}{100}$ × "203" (=20.3) **or** $\frac{10}{100}$ × "174" (=17.4) oe
			P1	for a complete process to find actual cost of 35 eg 0.9 ×5.80 × 35 oe
			A1	cao SC B2 156.6(0)

(**Q16 1MA1/1F, Nov 2017**)

Q43.

Paper 1MA1: 3F			
Question	**Working**	**Answer**	**Notes**
		Statement	C1 for a full explanation

(**Q08 1MA1/3F/S1, Specimen papers**)

Q44.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	180	M1	rounds one figure appropriately 92 to 90 or 100 **or** 1.63 to 2 or 1.5 or 1.6 or 1.7	
		A1	for 180 (= 90×2) or 135 (= 90×1.5) or 144 (= 90×1.6) or 153 (= 90 × 1.7) or 200 (= 100×2) or 150 (= 100×1.5) or 160 (= 100×1.6) or 170 (= 100 × 1.7) or 163 (= 100×1.63) or 184 (= 92 × 2) or 138 (= 92 × 1.5) or 147.2 (= 92 × 1.6) or 156.4 (= 92 × 1.7)	Answer of 149.96 (92 × 1.63) gets M0A0 Answer with no working gets M0A0 Ignore further rounding of their result
(b)	947.2	B1	cao	

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

Q45.

Question	Answer	Mark	Mark scheme	Additional guidance
	330	B1	cao	

(**Q04 1MA1/1F, Nov 2021**)

Q46.

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**)

Q47.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	30	P1	for a start to the process, eg 5406 ÷ 6 (= 901) **or** 5400 ÷ 6 (= 900) **or** 5000 ÷ 6 (= 833.33..) **or** 5410 ÷ 6 (= 901.66..)	
		P1	for a process to find the length of one side, eg $\sqrt{"901"}$ **or** $\sqrt{"900"}$ **or** $\sqrt{"833.33.."}$ **or** $\sqrt{"901.66.."}$	
		A1	for 30	Must be based on the use of a rounded value in a calculation
(b)	Explanation	C1	for a correct explanation based on their working in (a), eg underestimate because I rounded the total area down	

(**Q10 1MA1/1H, Nov 2021**)

Q48.

Question	Working	Answer	Mark	Notes
		60	B1	cao

(**Q02 1MA1/2F, June 2017**)

Q49.

Question		Working	Answer	Mark	Notes
			42000	1	B1 cao

(**Q01 1MA1/3F/M1, Specimen papers**)

Q50.

Question	Working	Answer	Mark	Notes
		4000	B1	for 4000

(**Q01 1MA1/3F, Nov 2017**)

Q51.

Question	Working	Answer	Notes
		7000	B1 cao

(**Q01 1MA1/2F/S2, Specimen papers**)

Q52.

Question	Working	Answer	Mark	Notes
		5.55	B1	cao

(**Q03 1MA1/1F/M2, Specimen papers**)

Q53.

Paper 1MA1: 1F			
Question	Working	Answer	Notes
		4.44	B1 cao

(**Q03 1MA1/1F/S1, Specimen papers**)

Q54.

Question	Working	Answer	Mark	Notes
		7.265	B1	cao

(**Q02 1MA1/1F, June 2017**)

Q55.

Paper 1MA1: 3F			
Question	Working	Answer	Notes
		2100	B1

(Q01 1MA1/3F/N, Specimen papers)

Q56.

Paper 1MA1: 3F			
Question	Working	Answer	Notes
		6000	B1 cao

(Q01 1MA1/3F/S1, Specimen papers)

Q57.

Question	Answer	Mark	Mark scheme	Additional guidance
	2500	B1	cao	

(Q03 1MA1/3F, June 2018)

Q58.

Question	Answer	Mark	Mark scheme	Additional guidance
	6000	B1	cao	Accept 6 thousand or six thousand

(Q01 1MA1/1F, June 2018)

Q59.

Question	Working	Answer	Mark	Notes
		2550	B1	cao

(Q04 1MA1/1F/M3, Specimen papers)

Q60.

Question	Answer	Mark	Mark scheme	Additional guidance
	4.6	B1	cao	

(Q02 1MA1/1F, Nov 2019)

Q61.

Question	Answer	Mark	Mark scheme	Additional guidance
	8000	B1	cao	

(Q02 1MA1/2F, Nov 2019)

Q62.

Question	Answer	Mark	Mark scheme	Additional guidance
	8100	B1	cao	

(Q02 1MA1/3F, Nov 2023)

Q63.

Question	Answer	Mark	Mark scheme	Additional guidance
	18 000	B1	cao	

(Q01 1MA1/1F, June 2024)

Q64.

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)

Q65.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	87 600	B1	cao	
(b)	13.524	M1	for 33.81 or 2.5 or $\frac{3381}{250}$ or digits 13524	
		A1	cao	

(Q17 1MA1/3F, Nov 2022)

Q66.

Question	Working	Answer	Mark	Notes
		Ami	M2	for an approximate calculation eg $\frac{600}{16+5}$ or $\frac{600}{21}$ or $\frac{600}{20}$ or $\frac{600}{20+5}$ or $\frac{600}{25}$ or $\frac{600}{25+5}$ or $\frac{600}{30}$ or $\frac{595}{20}$
		with estimate	(M1	for using 600 or 5 or 4)
			C1	Ami's answer /27.1115 is closest with accurately calculated figure from approximation

(**Q20 1MA1/1F, Nov 2017**)

Q67.

Question	Working	Answer	Mark	Notes
(a)		275.400(96709035)	M1	9.952(38664844) or 53.152(38664844)
			A1	275.400(96709035)
(b)		280	B1	ft provided part (a) is to at least 4 significant figures

(**Q17 1MA1/2F/M2, Specimen papers**)

Q68.

Question		Working	Answer	Mark	Notes
			2.18	3	M1 1.643… or 8.143… M1 (= 2.1773…..) B1 2.18 or ft

(**Q12 1MA1/2F/M1, Specimen papers**)

Q69.

Question	Working	Answer	Mark	Notes
(a)		2.7560…	M1	for 1.0654(059…), 0.1402(633…), 7.5957(541…), 2.756 truncated or rounded to no less than 2dp
			A1	for 2.7560(….)
(b)		2.76	B1	for 2.76 ft from (a)

(**Q23 1MA1/2F, Nov 2017**)

Q70.

Question	Answer	Mark	Mark scheme	Additional guidance
	1.6	B1	cao	

(**Q02 1MA1/2F, June 2018**)