Mark Scheme

Q1.

Paper 1MA1: 1F			
Question	**Working**	**Answer**	**Notes**
(a)		$\frac{17}{35}$	M1 for common denominators with at least one numerator correct
			A1
(b)		$\frac{20}{9}$	M1 for $\frac{5}{3}\times\frac{4}{3}$ or $\frac{20}{12}\div\frac{9}{12}$
			A1

(**Q18 1MA1/1F/N, Specimen papers**)

Q2.

Paper 1MA1: 2F			
Question	**Working**	**Answer**	**Notes**
(a)			C1 for a correct evaluation of the method shown by giving at least one correct error made, eg. "didn't multiply the 1 by 5"
(b)			C1 for a correct evaluation of the method shown by giving at least one correct error made, eg. "can't split a mixed number" or "should convert to improper (oe) fractions first"

(**Q19 1MA1/2F/S1, Specimen papers**)

Q3.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	$\frac{95}{28}$	M1	for a method to add using common denominators with at least one fraction correct (matching numerator with common denominator) eg $\frac{60}{28}+\frac{35}{28}$ or $(2)\frac{4}{28}+(1)\frac{7}{28}$	Use of decimals gets no credit unless it leads to a correct fraction
		A1	$\frac{95}{28}$ oe eg $3\frac{11}{28}$	
(b)	$1\frac{3}{5}$	M1	for $\frac{6}{5}\times\frac{4}{3}$ or $\frac{24}{20}\div\frac{15}{20}$ or $\frac{8}{5}$ oe eg $1\frac{9}{15}$	Use of decimals gets no credit unless it leads to a correct fraction
		A1	cao	

(**Q01 1MA1/1H, June 2018**)

Q4.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	$\frac{95}{28}$	M1	for a method to add using common denominators with at least one fraction correct (matching numerator with common denominator) eg $\frac{60}{28}+\frac{35}{28}$ **or** $(2)\frac{4}{28}+(1)\frac{7}{28}$	Use of decimals gets no credit unless it leads to a correct fraction
		A1	$\frac{95}{28}$ oe eg $3\frac{11}{28}$	
(b)	$1\frac{3}{5}$	M1	for $\frac{6}{5}\times\frac{4}{3}$ **or** $\frac{24}{20}\div\frac{15}{20}$ **or** $\frac{8}{5}$ oe eg $1\frac{9}{15}$	Use of decimals gets no credit unless it leads to a correct fraction
		A1	cao	

(Q19 1MA1/1F, June 2018)

Q5.

Question	Working	Answer	Mark	Notes
		$\frac{5}{7}$	P1	for $\frac{7}{5}=1.4$ **or** $\frac{5}{7}=0.7..$ **or** compares $\frac{1}{7}$ to $\frac{1}{5}$ **or** compare $\frac{5}{7}$ to 1 eg $1-\frac{5}{7}(=\frac{2}{7})$ **or** compare $\frac{7}{5}$ to 1 eg $\frac{7}{5}=1\frac{2}{5}$ **or** eg $\frac{49}{35}$ **or** $\frac{14}{35}$ **or** $\frac{25}{35}$ oe
		supported	P1	for $\frac{7}{5}=1.4$ and $\frac{5}{7}=0.7..$ **or** compares $\frac{5}{7}$ to 1 eg $1-\frac{5}{7}(=\frac{2}{7})$ and $\frac{7}{5}$ to 1 eg $\frac{7}{5}=1\frac{2}{5}$ **or** two correct fractions with common denominator eg $\frac{49}{35}$ and $\frac{25}{35}$
			C1	for $\frac{5}{7}$ with supporting evidence

(Q14 1MA1/1F, Nov 2017)

Q6.

Question	Working	Answer	Notes
		$\frac{3}{40}$	M1 $\frac{75}{1000}$ oe A1

(Q03 1MA1/2F/S2, Specimen papers)

Q7.

Question	Working	Answer	Notes
		$\frac{19}{100}$	B1 cao

(**Q02 1MA1/3F/S2, Specimen papers**)

Q8.

Question	Working	Answer	Notes
		60	B1 cao

(**Q05 1MA1/3F/S2, Specimen papers**)

Q9.

Paper 1MA1: 1F			
Question	Working	Answer	Notes
		$\frac{37}{1000}$	B1

(**Q02 1MA1/1F/N, Specimen papers**)

Q10.

Paper 1MA1: 2F			
Question	Working	Answer	Notes
		$\frac{21}{100}$	B1

(**Q03 1MA1/2F/S1, Specimen papers**)

Q11.

Paper 1MA1: 2F			
Question	Working	Answer	Notes
		0.4375	B1 cao

(**Q02 1MA1/2F/N, Specimen papers**)

Q12.

Question	Working	Answer	Mark	Notes
		0.07	B1	cao

(**Q01 1MA1/2F, Nov 2017**)

Q13.

Question	Working	Answer	Mark	Notes
		80	B1	cao

(**Q04 1MA1/1F, June 2017**)

Q14.

Question	Working	Answer	Mark	Notes
		70	B1	cao

(**Q02 1MA1/1F/M2, Specimen papers**)

Q15.

Question		Working	Answer	Mark	Notes
			35	1	B1 cao

(**Q03 1MA1/1F/M1, Specimen papers**)

Q16.

Question	Answer	Mark	Mark scheme	Additional guidance
	8	B1	cao	

(**Q01 1MA1/2F, June 2018**)

Q17.

Question	Answer	Mark	Mark scheme	Additional guidance
	$\frac{3}{9}$	B1	for $\frac{3}{9}$ accept $\frac{1}{3}$	

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

Q18.

Question	Answer	Mark	Mark scheme	Additional guidance
	60	P1	for $240 \div (5 + 3 + 2)$ $(= 24)$	
		P1	for complete process to find the number of cans of each drink eg $5 \times$ "24" $(= 120)$ and $3 \times$ "24" $(= 72)$ and $2 \times$ "24" $(= 48)$	
		P1	for process to find the number of cans removed eg "72" $\div 2$ $(= 36)$ and "48" $\div 12$ $(= 4)$	
		P1	for process to find percentage eg $\frac{"120"}{240-("36"+"4")} \times 100$ or $\frac{"120"}{"120"+("72"-"36")+("48"-"4")} \times 100$	
		A1	cao	
			Alternative	
		P1	for process to find proportion of lemonade and orange cans removed, eg $3 \times \frac{1}{2}$ $(= 1\frac{1}{2})$ and $2 \times \frac{1}{12}$ $(= \frac{1}{6})$	
		P1	for process to find proportion of lemonade and orange cans remaining, eg $3 - "1\frac{1}{2}" + 2 - "\frac{1}{6}"$ $(= 3\frac{1}{3})$	
		P1	for $5 + "3\frac{1}{3}"$ $(= 8\frac{1}{3})$	
		P1	for process to find percentage eg $(5 \div "8\frac{1}{3}") \times 100$	
		A1	cao	

(**Q18 1MA1/1F, Nov 2022**)

Q19.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)(i)	2 : 6 : 5	P1	for process to compare ratios, eg $a : b = 2 : 6$ or $b : c = 3 : 2.5$	Could use 3 or any common multiple of 3 and 6
		A1	for 2 : 6 : 5 oe	
(ii)	$\frac{2}{13}$	M1	for process to find fraction, eg $\frac{[2]}{[2+6+5]}$ or for $\frac{a}{a+b+c}$	
		A1	for $\frac{2}{13}$ oe or ft (a)(i)	
(b)	1 : 10	P1	for process to express all numbers in terms of one number, eg $p = 5 \times 2m$ $(= 10m)$ or $m = \frac{n}{2}$ **or** for $2m = \frac{p}{5}$ **or** for assigning values in the ratio given, eg $m = 1, n = 2, p = 10$ **or** for $n : m : p = 2 : 1 : 10$ oe **or** 10 : 1 oe	
		A1	for 1 : 10 oe	

(Q24 1MA1/1F, Nov 2022)

Q20.

Question	Working	Answer	Mark	Notes
		$\frac{2}{5}$	B1	or equivalent fraction

(Q01 1MA1/3F/M3, Specimen papers)

Q21.

Question	Working	Answer	Mark	Notes
		$\frac{9}{30}$	B1	cao

(Q03 1MA1/3F/M3, Specimen papers)

Q22.

Question	Answer	Mark	Mark scheme	Additional guidance
	Yes (supported)	P1	starts process to find the number of tins or meals needed, eg $2 \times \frac{1}{4} (= \frac{2}{4} = \frac{1}{2})$ or $14 \times \frac{1}{4} (= \frac{14}{4}$ oe) or $2 \times 14 (= 28)$ or $8 \div 2$ **or** to find the number of meals from 8 tins, eg $8 \div \frac{1}{4} (= 32)$	Numbers may be expressed in decimal form
		P1	a complete process to find the number of tins needed, eg $14 \times \frac{2}{4} (= 7)$ **or** $8 \div 2$ and "$\frac{14}{4}$" **OR** to find the numbers of meals $8 \div \frac{1}{4} (= 32)$ and $2 \times 14 (= 28)$ **or** $8 \div \frac{2}{4} (= 16)$	
		C1	'Yes' from a comparison of correct values, eg 7 (and 8) **or** 32 and 28 **or** 16 (and 14) **or** $\frac{14}{4}$ and 4	Correct working needs to be accompanied by a statement confirming enough food has been bought.

(Q06 1MA1/1F, Nov 2018)

Q23.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	$\frac{10}{16}$	B1	cao	
(b)	$\frac{11}{12}$	M1	for $\frac{10}{12}$ **OR** for using a suitable common denominator other than 12 with at least one of the two fractions correct, eg $\frac{2}{24} + \frac{20}{24}$	
		A1	for $\frac{11}{12}$ oe	Accept any equivalent fraction

(Q11 1MA1/1F, Nov 2018)

Q24.

Question	Answer	Mark	Mark scheme	Additional guidance
	$\frac{31}{100}$	B1	cao	

(Q05 1MA1/2F, Nov 2018)

Q25.

Question	Answer	Mark	Mark scheme	Additional guidance
	$\frac{5}{7}, \frac{11}{15}, \frac{3}{4}, \frac{19}{25}$	M1	conversion into decimals or percentages or other equivalent form, at least two conversions correct, **or** any three fractions in correct order	0.71(...), 0.73(...), 0.75, 0.76
		A1	cao	Accept list in reverse order for this mark Accept expressed in equivalent decimals or percentages or any other appropriate form

(**Q06 1MA1/2F, Nov 2018**)

Q26.

Question	Answer	Mark	Mark scheme	Additional guidance
	90	B1	cao	

(**Q04 1MA1/3F, Nov 2018**)

Q27.

Question	Answer	Mark	Mark scheme	Additional guidance
	$\frac{1}{4}, \frac{1}{3}, \frac{1}{2}, \frac{7}{12}, \frac{3}{4}$	M1	converts fractions to a common equivalent form, at least two conversions correct eg fractions with a denominator of 12, decimals or percentages, **or** any 4 fractions in correct order	0.25, 0.33(…), 0.5, 0.58(…), 0.75
		A1	cao	Accept list in reverse order for this mark Accept expressed in equivalent decimals or percentages or any other appropriate from or mixed forms

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

Q28.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	14	B1	for 14	
(b)	Explanation	C1	for explanation **Acceptable examples** she divided by 2 but should have multiplied by 2 there are 96 halves in 48 $48 \times 2 = 96$ **Not acceptable examples** $24 \times 2 = 48$	

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

Q29.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	$\frac{7}{15}$	M1	for suitable common denominator with at least one fraction out of two correct, eg $\frac{10}{15}-\frac{3}{15}$ oe	
		A1	oe	
(b)	$\frac{1}{2}$	M1	for method to multiply fractions, eg $\frac{2\times3}{3\times4}$, $\frac{8\times9}{12\times12}$ or to simplify, $\frac{1}{3}\times\frac{3}{2}$ or $\frac{2}{1}\times\frac{1}{4}$ **OR** for an answer equivalent to $\frac{1}{2}$ (unsimplified) eg $\frac{2}{4}$, 0.5	
		A1	cao	

(**Q19 1MA1/1F, June 2019**)

Q30.

Question	Answer	Mark	Mark scheme	Additional guidance
	$5\frac{3}{5}$	M1	for writing as improper fractions with at least one correct, eg $\frac{7}{2}\times\frac{8}{5}$ oe	
		M1	(dep) for multiplying improper fractions, eg $\frac{"56"}{"10"}$ **or** $5\frac{6}{10}$ **or** $\frac{28}{5}$ oe	
		A1	cao	

(**Q09 1MA1/1H, June 2019**)

Q31.

Question	Answer	Mark	Mark scheme	Additional guidance
	39	M1	for finding one quarter of 52, eg 52 ÷ 4 (= 13) **OR** for finding the fraction to be filled, eg $1-\frac{1}{4}$ $\left(=\frac{3}{4}\right)$ oe	Accept equivalent decimals or percentages
		M1	for a complete method eg 52 − "13" or "13" × 3 **OR** for $"\frac{3}{4}"\times52$	
		A1	cao	

(**Q08 1MA1/3F, June 2019**)

Q32.

Question	Answer	Mark	Mark scheme	Additional guidance
	$\frac{3}{5}$	M1	for a start in the method eg $35 + 50 + 75$ (= 160) **or** $400 - 35 - 50 - 75$ (= 240) or $\frac{160}{400}$ oe	
		M1	for eg $\frac{400-"160"}{400}$ or $\frac{2}{5}$ or $1-\frac{160}{400}$ **or** for an unsimplified answer eg $\frac{"240"}{400}$ oe or as 60% oe	
		A1	cao	

(**Q10 1MA1/3F, June 2019**)

Q33.

Question	Answer	Mark	Mark scheme	Additional guidance
	$2\frac{1}{3}$	M1	for either $\frac{7}{4}$ oe or $\frac{4}{3}$ oe	
		M1	for method to find the product, eg. $\frac{7\times4}{4\times3}$ or $\frac{21\times16}{12\times12}$ oe or for $\frac{28}{12}$ or $\frac{7}{3}$ oe	
		A1	for $2\frac{1}{3}$ or an equivalent mixed number	

(**Q03 1MA1/1H, Nov 2019**)

Q34.

Question	Answer	Mark	Mark scheme	Additional guidance
	$\frac{2}{5}$	B1	cao	

(**Q04 1MA1/1F, Nov 2019**)

Q35.

Question	Answer	Mark	Mark scheme	Additional guidance
	$2\frac{1}{3}$	M1	for either $\frac{7}{4}$ oe or $\frac{4}{3}$ oe	
		M1	for method to find the product, eg $\frac{7\times4}{4\times3}$ or $\frac{21\times16}{12\times12}$ oe or for $\frac{28}{12}$ or $\frac{7}{3}$ oe	
		A1	for $2\frac{1}{3}$ or an equivalent mixed number	

(**Q22 1MA1/1F, Nov 2019**)

Q36.

Question	Answer	Mark	Mark scheme	Additional guidance
	$\frac{13}{20}$	M1	for $20 - 7$ (= 13) **or** $\frac{7}{20}$ oe **or** 0.65 **or** 65%	
		A1	for $\frac{13}{20}$ or equivalent fraction	

(**Q07 1MA1/2F, Nov 2019**)

Q37.

Question	Answer	Mark	Mark scheme	Additional guidance
	0.35	P1	for $\left(\frac{1}{10}+\frac{3}{5}\right)\div 2$ **or** 0.1 **and** 0.6 **or** 10(%) **and** 60(%) **or** 35(%) **or** for converting to equivalent fractions with a common denominator eg $\frac{1}{10}$ **and** $\frac{6}{10}$	
		A1	for $\frac{7}{20}$ oe **or** 0.35	

(**Q12 1MA1/2F, Nov 2019**)

Q38.

Question	Answer	Mark	Mark scheme	Additional guidance
	10	B1	cao	

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

Q39.

Question	Answer	Mark	Mark scheme	Additional guidance
	8	B1	cao	

(**Q02 1MA1/3F, Nov 2020**)

Q40.

Question	Answer	Mark	Mark scheme	Additional guidance
	$\frac{3}{4}$	M1	for method to find fraction shaded, eg 12 out of 16 squares shaded or unsimplified answer eg $\frac{12}{16}$ **or** for $1-\frac{1}{4}$ oe or for an answer of $\frac{1}{4}$	May be expressed in a wide variety of ways.
		A1	cao	

(**Q07 1MA1/3F, Nov 2020**)

Q41.

Question	Answer	Mark	Mark scheme	Additional guidance
	Shown	M1	for conversion to improper fractions eg. $\frac{7}{3}$ **or** $\frac{15}{4}$	Need not be shown with operators
		M1	(dep) for method to multiply fractions, eg. $\frac{7\times15}{3\times4}\left(=\frac{105}{12}\right)$ **or** $\frac{28\times45}{12\times12}\left(=\frac{1260}{144}\right)$ oe	
		C1	for complete working showing each stage as far as $\frac{35}{4}$ or $8\frac{9}{12}$	

(**Q02 1MA1/1H, Nov 2020**)

Q42.

Question	Answer	Mark	Mark scheme	Additional guidance
	Shown	M1	for conversion to improper fractions eg. $\frac{7}{3}$ **or** $\frac{15}{4}$	Need not be shown with operators
		M1	(dep) for method to multiply fractions, eg. $\frac{7\times15}{3\times4}\left(=\frac{105}{12}\right)$ **or** $\frac{28\times45}{12\times12}\left(=\frac{1260}{144}\right)$ oe	
		C1	for complete working showing each stage as far as $\frac{35}{4}$ or $8\frac{9}{12}$	

(**Q21 1MA1/1F, Nov 2020**)

Q43.

Question	Answer	Mark	Mark scheme	Additional guidance
	$1\frac{8}{15}$	M2	for a complete method, eg $4-2+\frac{3}{15}-\frac{10}{15}$ condoning error with one numerator **or** for $\frac{21}{5}-\frac{8}{3}=\frac{63}{15}-\frac{40}{15}(=\frac{23}{15})$ with no more than one error	
		(M1	for finding two fractions with a correct common denominator, with at least one correct corresponding numerator, eg $\frac{3}{15}, \frac{10}{15}$ **or** for converting both to improper fractions, eg $\frac{21}{5}, \frac{8}{3}$)	At least one improper fraction must be correct Any equivalents must be a mixed number
		A1	$1\frac{8}{15}$ oe	

(**Q22 1MA1/1F, Nov 2021**)

Q44.

Question	Answer	Mark	Mark scheme	Additional guidance
	$1\frac{8}{15}$	M2	for a complete method, eg $4-2+\frac{3}{15}-\frac{10}{15}$ condoning error with one numerator **or** for $\frac{21}{5}-\frac{8}{3}=\frac{63}{15}-\frac{40}{15}(=\frac{23}{15})$ with no more than one error	
		(M1	for finding two fractions with a correct common denominator, with at least one correct corresponding numerator, eg $\frac{3}{15}, \frac{10}{15}$ **or** for converting both to improper fractions, eg $\frac{21}{5}, \frac{8}{3}$)	At least one improper fraction must be correct Any equivalents must be a mixed number
		A1	$1\frac{8}{15}$ oe	

(**Q03 1MA1/1H, Nov 2021**)

Q45.

Question	Answer	Mark	Mark scheme	Additional guidance
	$\frac{17}{30}$	B1	for $\frac{17}{30}$ or any equivalent fraction	

(**Q10 1MA1/2F, Nov 2021**)

Q46.

Question	Answer	Mark	Mark scheme	Additional guidance
	$\frac{4}{9}, \frac{3}{5}, \frac{5}{8}, \frac{2}{3}$	M1	converts into decimals or percentages or equivalent fractions, at least 2 conversions correct **or** for any 3 fractions in correct order	0.44(...), 0.6, 0.625, 0.66(...)
		A1	for $\frac{4}{9}, \frac{3}{5}, \frac{5}{8}, \frac{2}{3}$	Accept in reverse order for this mark Accept expressed in equivalent decimals or percentages or fractions or in mixed numerical form

(**Q15 1MA1/2F, Nov 2021**)

Q47.

Question	Answer	Mark	Mark scheme	Additional guidance
	No (supported)	P1	for a process to find Rachel's share, eg $600 \div 5 \times 2$ (= 240)	
		P1	for process to find Samina's share eg (600 – "240") ÷ 4 (= 90)	
		P1	for a process to find either of Tom's share, eg 600 – "240" – "90" (= 270) **or** 3 × "90" (=270) **or** 600 ÷ 3 (= 200) for comparison purposes	Note This mark, if awarded for 200, may be the only mark awarded
		C1	for "No" and accurate figures eg 270 and 200 **or** 270 and 70 (difference)	"No" may be implied by a statement Answer only with no working, no marks

(**Q19 1MA1/2F, Nov 2021**)

Q48.

Question	Answer	Mark	Mark scheme	Additional guidance
	11	B1	cao	

(Q04 1MA1/3F, Nov 2021)

Q49.

Question	Answer	Mark	Mark scheme	Additional guidance
	80	P1	for $1-\frac{13}{15}\left(=\frac{2}{15}\right)$ **or** $\frac{13}{15}\times 600$ (million) (= 520 (million))	Condone no million or may see 000 000 used* *In this case condone up to two missing 0s for the award of the P marks. For P marks accept $\frac{13}{15}$, $\frac{2}{15}$ rounded or truncated to no less than 2dp.
		P1	for "$\frac{2}{15}$"$\times 600$ (million) (= 80 (million)) **or** 600 – "520" (=80) oe	
		A1	Accept 80 000 000	

(Q14 1MA1/3F, Nov 2021)

Q50.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	$\frac{7}{12}$	M1	for finding two fractions with a correct common denominator, with at	
		A1	least one correct corresponding numerator, eg. $\frac{5}{12}$, $\frac{2}{12}$	Ignore errors in cancelling following sight of an equivalent fraction to $\frac{7}{12}$
(b)	$\frac{3}{16}$	M1	for $\frac{7}{12}$ oe eg $\frac{14}{24}$, $\frac{21}{36}$, $\frac{28}{48}$, $\frac{35}{60}$, $\frac{42}{72}$, ... for method to multiply fractions, eg $\frac{3\times 5}{10\times 8}$ $(=\frac{15}{80})$ **or** simplifies the calculation eg $\frac{3}{2}\times\frac{1}{8}$	
		A1	**or** for an answer equivalent to $\frac{3}{16}$ unsimplified cao	

(Q12 1MA1/1F, June 2022)

Q51.

Question	Answer	Mark	Mark scheme	Additional guidance
20	$\frac{39}{88}$	M1	for finding the gap (A) $1-\frac{5}{8}$ $(=\frac{3}{8}=\frac{33}{88})$ **or** (C) $1-\frac{9}{11}$ $(=\frac{2}{11}=\frac{16}{88})$ **or** $\frac{5}{8}+\frac{9}{11}$ $(=\frac{55}{88}+\frac{72}{88}=\frac{127}{88})$	
		M1	for $\frac{9}{11}-\frac{3}{8}$ $(=\frac{72}{88}-"\frac{33}{88}")$ **or** $\frac{5}{8}-\frac{2}{11}$ $(=\frac{55}{88}-"\frac{16}{88}")$ **or** $1-\frac{3}{8}-\frac{2}{11}$ $(=1-"\frac{33}{88}"-"\frac{16}{88}")$ oe **or** $\frac{5}{8}+\frac{9}{11}-1$ $(=\frac{55}{88}+\frac{72}{88}-1)$	
		A1	oe	

(**Q20 1MA1/1F, June 2022**)

Q52.

Question	Answer	Mark	Mark scheme	Additional guidance
	$\frac{7}{10}$	B1	oe fraction	

(**Q02 1MA1/2F, June 2022**)

Q53.

Question	Answer	Mark	Mark scheme	Additional guidance
	7	B1	cao	

(**Q02 1MA1/3F, June 2022**)

Q54.

Question	Answer	Mark	Mark scheme	Additional guidance
	$\frac{3}{50}$	M1	for $\frac{60}{1000}$ or equivalent fraction	
		A1	cao	

(**Q12 1MA1/3F, June 2022**)

Q55.

Question	Answer	Mark	Mark scheme	Additional guidance
	$\frac{37}{100}$	B1	oe fraction	

(Q02 1MA1/2F, Nov 2022)

Q56.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	82.5	M1	for a complete method, eg $132 \div 8 \times 5$	$132 - 82.5$ (= 49.5) M1 implied
		A1	cao	
(b)	$\frac{1}{4}, \frac{9}{32}, \frac{21}{64}, \frac{3}{8}$	M1	converts into decimals or percentages or equivalent fractions, at least 2 conversions correct **or** for any 3 fractions in correct order	0.25, 0.28(125), 0.32(8125), 0.37(5)
		A1	cao	Accept in reverse order for this mark Accept expressed in equivalent decimals or percentages or fractions or in mixed numerical form

(Q12 1MA1/2F, Nov 2022)

Q57.

Question	Answer	Mark	Mark scheme	Additional guidance
	$\frac{3}{10}$	B1	for $\frac{3}{10}$ oe	Accept equivalent fractions, eg $\frac{30}{100}$

(Q01 1MA1/1F, Nov 2022)

Q58.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	$3\frac{17}{20}$	M1	for finding two fractions with a correct common denominator (multiple of 20), with at least one correct corresponding numerator, eg. $\frac{12}{20}, \frac{5}{20}$ or $\frac{32}{20}, \frac{45}{20}$	May be from $\frac{3}{5}$ and $\frac{1}{4}$ or from $\frac{8}{5}$ and $\frac{9}{4}$
		A1	for $3\frac{17}{20}$ or an equivalent mixed number SC: B1 for 3.85 if M0 scored	
(b)	shown	M1	for $\frac{8}{3} \times \frac{1}{6}$ oe or $\frac{4}{9} \times \frac{6}{1}$ oe or $\frac{8}{3} \times \frac{9}{4}$ oe	
		A1	for unsimplified fraction which could lead to $\frac{4}{9}$, eg $\frac{8}{18}$ or for $\frac{4}{3} \times \frac{1}{3}$ or $\frac{24}{9} \div 6$ **or** for unsimplified fraction which could lead to $2\frac{2}{3}$, eg $\frac{24}{9}$ **or** for unsimplified fraction which could lead to 6, eg $\frac{72}{12}$	

(**Q02 1MA1/1H, Nov 2022**)

Q59.

Question	Answer	Mark	Mark scheme	Additional guidance
	$\frac{3}{10}$	B1	or any equivalent fraction	3 : 10 or 0.3 or 30% get no marks

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

Q60.

Question	Answer	Mark	Mark scheme	Additional guidance
	$\frac{5}{14}$	M1	for method to multiply fractions, eg $\frac{6 \times 5}{7 \times 12}$ **or** to simplify, eg $\frac{1}{7} \times \frac{5}{2}$ **OR** for a fractional answer equivalent to $\frac{5}{14}$	$\frac{30}{84}, \frac{15}{42}, \frac{10}{28}$
		A1	cao	

(**Q15 1MA1/1F, June 2023**)

Q61.

Question	Answer	Mark	Mark scheme	Additional guidance
	$4\frac{7}{8}$	M2	for a complete method, eg $7-2+\frac{3}{8}-\frac{4}{8}$ condoning error with one numerator **or** for $\frac{59}{8}-\frac{5}{2}=\frac{59}{8}-\frac{20}{8}$ $(=\frac{39}{8})$ with no more than one error **OR** for an answer of 4.875	
		(M1	for finding two fractions with a correct common denominator, with at least one correct corresponding numerator, eg $\frac{3}{8}, \frac{4}{8}$ **or** for converting both to improper fractions, eg $\frac{59}{8}, \frac{5}{2}$ **OR** for $7.375-2.5$)	At least one improper fraction must be correct Both decimals must be correct
		A1	for $4\frac{7}{8}$ oe eg $4\frac{14}{16}$	Any equivalents must be a mixed number

(**Q21 1MA1/1F, June 2023**)

Q62.

Question	Answer	Mark	Mark scheme	Additional guidance
	$4\frac{7}{8}$	M2	for a complete method, eg $7-2+\frac{3}{8}-\frac{4}{8}$ condoning error with one numerator **or** for $\frac{59}{8}-\frac{5}{2}=\frac{59}{8}-\frac{20}{8}$ $(=\frac{39}{8})$ with no more than one error **OR** for an answer of 4.875	
		(M1	for finding two fractions with a correct common denominator, with at least one correct corresponding numerator, eg $\frac{3}{8}, \frac{4}{8}$ **or** for converting both to improper fractions, eg $\frac{59}{8}, \frac{5}{2}$ **OR** for $7.375-2.5$)	At least one improper fraction must be correct Both decimals must be correct
		A1	for $4\frac{7}{8}$ oe eg $4\frac{14}{16}$	Any equivalents must be a mixed number

(**Q02 1MA1/1H, June 2023**)

Q63.

Question	Answer	Mark	Mark scheme	Additional guidance
	800	M1	for method to work with fraction and 50, eg 16×50 **or** $50 \div \frac{1}{16}$ **or** $16 \times 50 + 50$ oe or $16 \times 50 - 50$ oe	$\frac{1}{16} = 0.0625$ 750 or 850 without working scores no marks
		A1	cao	

(**Q13 1MA1/2F, June 2023**)

Q64.

Question	Answer	Mark	Mark scheme	Additional guidance
	$\frac{6}{21}$	B1	eg $\frac{2}{7}$ or any equivalent fraction	

(**Q04 1MA1/3F, Nov 2023**)

Q65.

Question	Answer	Mark	Mark scheme	Additional guidance
	$\frac{9}{10}$	B1	oe	

(**Q02 1MA1/2F, Nov 2023**)

Q66.

Question	Answer	Mark	Mark scheme	Additional guidance
	60	B1	cao	

(**Q05 1MA1/1F, Nov 2023**)

Q67.

Question	Answer	Mark	Mark scheme	Additional guidance
	$3\frac{3}{5}$	M1	for inverting to give $\frac{3}{5}\times 6$ oe **OR** for two correct fractions with a common denominator eg $\frac{18}{30}$ $\frac{5}{30}$	
		M1	for method to calculate eg $\frac{3\times 6}{5}$ or $\frac{3\times 30}{5\times 5}$ or $\frac{18}{5}$ or $\frac{90}{25}$ oe	
		A1	for $3\frac{3}{5}$ or any other equivalent mixed number eg $3\frac{15}{25}$	

(**Q17 1MA1/1F, Nov 2023**)

Q68.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	$2\frac{2}{15}$	M1	for a method to subtract using a common denominator with at least one fraction correct (suitable common denominator for original fractions with at least one correct numerator) eg $\frac{57}{15}-\frac{25}{15}$ **or** $(3)\frac{12}{15}-(1)\frac{10}{15}$	Use of decimals gets no credit unless it leads to a correct fraction
		A1	for $2\frac{2}{15}$ oe eg $\frac{32}{15}$	ISW incorrect conversion from improper fraction to mixed number or incorrect simplification of improper fraction.
(b)	Mistake identified	C1	for explaining that Kevin did not convert to the correct mixed number **Acceptable examples** In his answer $\frac{9}{24}$ should have been $\frac{11}{24}$ The 9 should be 11 He has not got the numerator right in his final answer He simplified into the mixed number incorrectly He has not put the remainder as the numerator $1\frac{9}{24}$ would give you $\frac{33}{24}$ rather than $\frac{35}{24}$ $\frac{35}{24}=1\frac{11}{24}$ **Not acceptable examples** He should have used a common denominator He has not simplified his answer He should have done keep, flip, change He converted the fraction wrongly	Figures may be seen in the question space.
			The answer should be $1\frac{10}{24}$	

(**Q21 1MA1/1F, June 2024**)

Q69.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	$2\frac{2}{15}$	M1	for a method to subtract using a common denominator with at least one fraction correct (suitable common denominator for original fractions with at least one correct numerator) eg $\frac{57}{15}-\frac{25}{15}$ **or** $(3)\frac{12}{15}-(1)\frac{10}{15}$	Use of decimals gets no credit unless it leads to a correct fraction
		A1	for $2\frac{2}{15}$ oe eg $\frac{32}{15}$	ISW incorrect conversion from improper fraction to mixed number or incorrect simplification of improper fraction
(b)	Mistake identified	C1	for explaining that Kevin did not convert to the correct mixed number **Acceptable examples** In his answer $\frac{9}{24}$ should have been $\frac{11}{24}$ The 9 should be 11 He has not got the numerator right in his final answer He simplified into the mixed number incorrectly He has not put the remainder as the numerator $1\frac{9}{24}$ would give you $\frac{33}{24}$ rather than $\frac{35}{24}$ $\frac{35}{24}=1\frac{11}{24}$ **Not acceptable examples** He should have used a common denominator He has not simplified his answer	Figures may be seen in the question space
			He should have done keep, flip, change He converted the fraction wrongly The answer should be $1\frac{10}{24}$	

(**Q02 1MA1/1H, June 2024**)

Q70.

Question	Answer	Mark	Mark scheme	Additional guidance
	$\frac{1}{4}$ $\frac{1}{2}$ $\frac{2}{3}$	B1	for correct order	Accept any form Accept 0.6 or 0.66 or 0.67 or 0.7 or 60% or 66% or 67% or 70% or better for $\frac{2}{3}$

(**Q05 1MA1/3F, June 2024**)

Q71.

Question	Answer	Mark	Mark scheme	Additional guidance
	16	B1	cao	

(**Q02 1MA1/3F, Nov 2024**)

Q72.

Question	Answer	Mark	Mark scheme	Additional guidance
	$\frac{3}{4}$	B1	for $\frac{3}{4}$ or any other equivalent fraction	

(**Q01 1MA1/2F, June 2019**)

Q73.

Question	Answer	Mark	Mark scheme	Additional guidance
	$\frac{7}{10}$	B1	for $\frac{7}{10}$ or for any other equivalent fraction	Eg $\frac{70}{100}$

(**Q03 1MA1/3F, Nov 2019**)

Q74.

Question	Answer	Mark	Mark scheme	Additional guidance
	0.75	B1	cao	

(**Q04 1MA1/1F, Nov 2020**)

Q75.

Question	Answer	Mark	Mark scheme	Additional guidance
	$\frac{37}{100}$	B1	or any other equivalent fraction	

(**Q01 1MA1/2F, Nov 2020**)

Q76.

Question	Answer	Mark	Mark scheme	Additional guidance
	0.09	B1	cao	Accept an answer of .09

(**Q03 1MA1/1F, Nov 2021**)

Q77.

Question	Answer	Mark	Mark scheme	Additional guidance
	0.8	B1	cao	

(Q03 1MA1/3F, Nov 2022)

Q78.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	$2\frac{1}{3}$	M1	for a method to subtract by writing both fractions with a common denominator with at least one correct numerator, eg. $3\frac{3}{6}-1\frac{1}{6}$ or $\frac{3}{6}-\frac{1}{6}(=\frac{2}{6})$ or $\frac{21}{6}-\frac{7}{6}(=\frac{14}{6})$ or $\frac{42}{12}-\frac{14}{12}(=\frac{28}{12})$	
		A1	for $2\frac{1}{3}$ or an equivalent mixed number	Do not ISW incorrect further work from correct equivalent mixed number
(b)	Shown	M1	for conversion to improper fractions, eg. $\frac{21}{4}$ or $\frac{7}{3}$ or $\frac{9}{4}$	
		M1		
		C1	(dep) for method to divide by a fraction, eg. $\frac{21}{4}\times\frac{3}{7}$ or $\frac{63}{12}\div\frac{28}{12}$	Must see an intermediate step, eg $\frac{63}{28}$ must be seen and then cancelled or correct cancelling seen before multiplication
			for complete work showing each stage as far as $\frac{9}{4}$ or $2\frac{7}{28}$	

(Q20 1MA1/1F, Nov 2024)

Q79.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	$3\frac{17}{20}$	M1	for finding two fractions with a correct common denominator (multiple of 20), with at least one correct corresponding numerator, eg. $\frac{12}{20}, \frac{5}{20}$ or $\frac{32}{20}, \frac{45}{20}$	May be from $\frac{3}{5}$ and $\frac{1}{4}$ or from $\frac{8}{5}$ and $\frac{9}{4}$
		A1	for $3\frac{17}{20}$ or an equivalent mixed number SC: B1 for 3.85 if M0 scored	
(b)	shown	M1	for $\frac{8}{3}\times\frac{1}{6}$ oe or $\frac{4}{9}\times\frac{6}{1}$ oe or $\frac{8}{3}\times\frac{9}{4}$ oe	
		A1	for unsimplified fraction which could lead to $\frac{4}{9}$, eg $\frac{8}{18}$ or for $\frac{4}{3}\times\frac{1}{3}$ or $\frac{24}{9}\div 6$ **or** for unsimplified fraction which could lead to $2\frac{2}{3}$, eg $\frac{24}{9}$ **or** for unsimplified fraction which could lead to 6, eg $\frac{72}{12}$	

(Q20 1MA1/1F, Nov 2022)

Q80.

Question	Answer	Mark	Mark scheme	Additional guidance
	$\frac{3}{100}$	B1	cao	

(**Q02 1MA1/3F, Nov 2018**)

Q81.

Question	Answer	Mark	Mark scheme	Additional guidance
	$\frac{40}{100}$	B1	for $\frac{40}{100}$ or any equivalent fraction	

(**Q03 1MA1/3F, Nov 2020**)

Q82.

Question	Answer	Mark	Mark scheme	Additional guidance
	25	B1	cao	

(**Q04 1MA1/2F, Nov 2020**)

Q83.

Question	Answer	Mark	Mark scheme	Additional guidance
	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 $(= 42)$	May be seen in parts
		P1	for a complete set of processes to find the required mark "100" – "42"(=58) or "40"+ "60" – "42" (=58)	
		A1	cao SC B2 for an answer of 48	

(**Q16 1MA1/2F, Nov 2020**)

Q84.

Question	Answer	Mark	Mark scheme	Additional guidance
	30	B1	cao	

(Q01 1MA1/1F, Nov 2021)

Q85.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	26	P1	for process to find $\frac{1}{6}$ of 120 minutes, eg $\frac{1}{6} \times 120$ (= 20)	
		P1	for process to find 20 % of 120 minutes, eg $\frac{20}{100} \times 120$ (= 24)	
		P1	(dep on P2) for a complete process to find the time remaining, eg 120 – 50 – "20" – "24"	May be seen in stages
		A1	cao	
(b)	No (supported)	C1	for No with reason or ft (a) **Acceptable examples** she was (at least) 4 minutes late she did not arrive until (at least) 3 04 pm it took her more than 90 minutes doing the activities **Not acceptable examples** Yes ..... she arrived after 3pm	The 'No'(or 'Yes') may not be required if it is clear from the reasoning that Elena did not (did) get to the café by 3pm

(Q12 1MA1/1F, Nov 2022)

Q86.

Question	Working	Answer	Mark	Notes
		$\frac{9}{100}$	B1	

(Q03 1MA1/1F/M3, Specimen papers)

Q87.

Paper 1MA1: 2F			
Question	Working	Answer	Notes
		$\frac{53}{64}$	P1 for interpreting information e.g. recognising that the shaded area = $\frac{3}{4}+\left(\frac{1}{4}\times\frac{1}{4}\right)+\left(\frac{1}{4}\times\frac{1}{4}\times\frac{1}{4}\right)$ or adding in lines to diagram to show 64ths A1 cao

(Q07 1MA1/2F/N, Specimen papers)

Q88.

Question	Working	Answer	Mark	Notes
		$\frac{11}{30}, \frac{2}{5}, \frac{7}{15}, \frac{1}{2}$	M1 A1	converts fractions to a common form, e.g. fractions with a denominator of 30, decimals or percentages, at least two conversions correct or any 3 fractions in correct order correct order

(**Q04 1MA1/2F, June 2017**)

Q89.

Paper 1MA1: 1F			
Question	**Working**	**Answer**	**Notes**
		$\frac{2}{7}$	B1

(**Q10 1MA1/1F/N, Specimen papers**)

Q90.

Question	Working	Answer	Notes
a		$\frac{5}{24}$	B1
b		$\frac{5}{14}$	M1 For using a correct common denominator A1 For $\frac{5}{14}$ oe
c		$2\frac{2}{3}$	M1 for $\frac{4}{5}\times\frac{10}{3}$ oe A1 for $2\frac{2}{3}$ or $\frac{8}{3}$

(**Q09 1MA1/1F/S2, Specimen papers**)

Q91.

Question		Working	Answer	Mark	Notes
			$\frac{23}{30}$	3	M1 for conversion to improper fractions, e.g. $\left(\frac{13}{5}-\frac{11}{6}\right)$ or for $\left(\frac{18}{30}-\frac{25}{30}\right)$ M1 for a complete correct method A1 for $\frac{23}{30}$ oe

(**Q17 1MA1/1F/M1, Specimen papers**)

Q92.

Question		Working	Answer	Mark	Notes
			$\frac{23}{30}$	3	M1 for conversion to improper fractions, e.g. $\left(\frac{13}{5}-\frac{11}{6}\right)$ or for $\left(\frac{18}{30}-\frac{25}{30}\right)$ M1 for a complete correct method A1 for $\frac{23}{30}$ oe

(Q01 1MA1/1H/M1, Specimen papers)

Q93.

Question		Working	Answer	Mark	Notes
			237	3	P1 starts process, e.g. $\frac{3}{5}\times 195$ oe (= 117) or $\frac{2}{3}\times(375-195)$ oe (= 120) P1 complete process A1 cao

(Q08 1MA1/3F/M1, Specimen papers)

Q94.

Question	Working	Answer	Mark	Notes
		60	M1 A1	for method to find the number, eg. $48\times\frac{3}{2}$ (=72) or to find $\frac{1}{6}$ th of the number, eg. 48 ÷ 4 (=12) cao

(Q10 1MA1/3F, Nov 2017)

Q95.

Question	Working	Answer	Notes
	720 000 ÷ 3	240 000	P1 for division by 3 A1 cao

(Q05 1MA1/2F/S2, Specimen papers)

Q96.

Question	Working	Answer	Mark	Notes
		268.20	P1	for a process to work out the value of the £1 coins, eg. 495 ÷ 3 (= 165) or 495 × 0.33...or of the 50p coins, eg. 124 ÷ 2 (= 62)
			P1	for process to find the number of 20p coins, eg. (495 – 124 – ("165") (= 206)
			P1	for complete process to find total value using consistent units., eg. ("165") + (124 ÷ 2) + ("206" × 0.2) or 165 + 62 + 41.2
			A1	cao (accept 268.2)

(**Q06 1MA1/2F, June 2017**)

Q97.

Question	Working	Answer	Mark	Notes
		40	M1	for 32 ÷ 4 (= 8) or 32 × 5 (= 160) or complete method eg 32 ÷ 4 × 5 oe (= 40)
			A1	cao

(**Q04 1MA1/3F, June 2017**)

Q98.

Paper 1MA1: 3F			
Question	**Working**	**Answer**	**Notes**
		1230	P1 for start to process eg. 6760 – 3879 – 1241 (= 1640) P1 for use of fraction eg. "1640"÷4 or $1-\frac{1}{4}\left(=\frac{3}{4}\right)$ A1

(**Q03 1MA1/3F/N, Specimen papers**)