

1(a). Caroline and Helen share a job in the ratio 3 : 2.

Caroline works for 24 hours a week.

Calculate how many hours a week Helen works.

----- hours [2]

(b). The annual pay for the whole job is £26 000.

Work out the annual pay for Caroline and for Helen.

Caroline £ -----

Helen £ ----- [3]

2(a). Write 40 : 2000 as a ratio in its simplest form.

(a) ----- : ----- [2]

(b). Two people share £350 in the ratio 1 : 6.

Calculate each share.

(b) £ £ [2]

3. Peter makes a large amount of pink paint by mixing red and white paint in the ratio 2 : 3.

Red paint costs £80 per 10 litres.

White paint costs £5 per 10 litres.

Peter sells his pink paint in 10-litre tins for £60 per tin.

Calculate how much **profit** he makes for each tin he sells.

£_____ [5]



4. Eva's camera takes photos with width and height in the ratio 3 : 2.
Photos can be printed in the following sizes.

20 cm by 16 cm

14 cm by 10 cm

24 cm by 16 cm

12 cm by 8 cm

Eva says

Only two of these sizes have the same ratio as my photos!

Which sizes have the same ratio as her photos?

-----[2]

5(a). These are some of the ingredients used to make Bolognese sauce.

<u>Bolognese sauce</u>	
Serves 4	
400 g	Mince
200 g	Tomatoes
50 g	Mushrooms
2	Onions

Marco is making Bolognese sauce to serve 16 people.

How many grams of mushrooms should he use?

-----g

[1]

(b). Gordon is making Bolognese sauce to serve 18 people.

(i) How many kilograms of mince should he use?

(i)..... kg

[2]

(ii) Mince costs £8.75 per kilogram.

Gordon buys the mince and pays with £20.

How much change should he receive?

(ii) £.....

[3]

6. Here are parts of three recipes for fruit punch.

Recipe A
150 ml pineapple juice
.....
.....
makes 850 ml

Recipe B
220 ml pineapple juice
.....
.....
makes 1200 ml

Recipe C
175 ml pineapple juice
.....
.....
makes 1 litre

Which of these three has the highest **proportion** of pineapple juice?
Show clearly how you decide.

[3]

7. Terri travels to and from school by bus.
Here are the bus fares for different types of ticket.

Ticket type	Fare
1-way	£1.35
Return	£2.16
All week	£9.80

Express the ratio

cost of **two** '1-way' tickets : cost of **one** 'Return' ticket

in its simplest form.

----- : -----

[2]

8. Here is a list of ingredients for a Chocolate Courgette Cake.

<p style="text-align: center;">Chocolate Courgette Cake (serves 4 people)</p> <p>200 g butter 300 g sugar 2 eggs 360 g plain flour 4 tablespoons cocoa 480 g grated courgettes</p>

Debi wants to make a Chocolate Courgette Cake to serve 6 people.

Complete the list of ingredients she needs.

<p style="text-align: center;">Chocolate Courgette Cake (serves 6 people)</p> <p>----- g butter</p> <p>----- g sugar</p> <p>----- eggs</p> <p>----- g plain flour</p> <p>----- tablespoons cocoa</p> <p>----- g grated courgettes</p>
--

[3]

9(a). Samira and Joanne share their living costs in the ratio 3 : 2.

The rent for their flat for a month is £700.

Work out how much of this rent they each pay.

Samira £

Joanne £ [3]

(b). For one gas bill, Joanne pays £84 for her share.

How much was the whole gas bill?

£ [3]

10. One day in winter, Stefan is filling the windscreen washer tank in his car.
The screen wash bottle gives the following information.

<u>Winter mix</u>	1 part screen wash with 2 parts water
<u>Summer mix</u>	1 part screen wash with 5 parts water

How much screen wash should Stefan use with 2.5 litres of water?

----- litres [2]

11. 14 bottles of lemonade cost £12.04.

Calculate the cost of 9 of these bottles of lemonade.

£ ----- [2]



12. The number of sprouts that Bill and Ruth eat is in the ratio 3 : 2.
Bill eats 12 sprouts.

How many sprouts are eaten altogether?

----- [2]

13. Lucinda is making mushroom soup.

<p style="text-align: center;">Mushroom Soup Serves 4 people</p> <p>500 g mushrooms 1 litre chicken stock 100 g butter 3 tablespoons flour 4 tablespoons cream</p>

She needs to make enough soup to serve 6 people.

- (i) How much butter does she need?

(i) ----- g [1]

- (ii) Mushrooms are sold in 300 g packs.

How many packs does Lucinda need to buy?

(ii) ----- [2]

14(a) Glyn, Mark and Clare are making bread rolls.

. This is the list of ingredients for their recipe.

Ingredients to make 12 bread rolls	
350 g	flour
20 g	butter
230 ml	water
2 teaspoons	yeast
1 teaspoon	salt

Glyn is going to make 36 bread rolls.

How many teaspoons of yeast will he need?

----- [1]

(b). Mark is going to make 30 bread rolls.

How much flour will he need?

----- g [2]

(c). Clare has 80 g of butter. She has plenty of all the other ingredients.

What is the greatest number of bread rolls that she can make?

----- [2]



15. Students at a sports college choose activities for games.

In Year 7 they chose between rounders and athletics in the ratio 1 : 4.

There are 60 students in Year 7.

Work out how many chose athletics.

----- [2]

16(a) Apple crumble is made using these ingredients.

Apple crumble	
Serves 6 people	
550g	apple
200g	sugar
120g	flour
30g	butter

Susumu makes apple crumble to serve 12 people.

How much flour should he use?

----- g [1]

(b). Natalie makes apple crumble for 2 people.

How much butter should she use?

----- g [1]

(c). Abena has 1.3 kg of apples and plenty of the other ingredients.

Can she make apple crumble for 15 people?

Explain how you got your answer.

-----[4]

17(a)

The ratio 20 minutes to 1 hour can be written in the form $1 : n$.

Find the value of n .

$n =$ [1]

(b). Kiri and Peter share some sweets in the ratio $6 : 7$.

What fraction of the sweets does Kiri receive?

..... [1]



18. Last year, Katie earned £16,200.
Her total loan repayments were £6400.

Katie estimates that the ratio of her loan repayments to her earnings is approximately 3 : 8.

Is she correct?

Show your reasoning.

-----[3]



19(a) The population of a village is in the following ratios.

- men : children = 11 : 3
- women : children = 5 : 2

Find the ratio men : women.

Give your answer in its simplest form.

----- : ----- [2]



(b). There are 36 children in the village.

Find the total population of the village.

----- [3]



20. Alan and Brian share a sum of money in the ratio 1 : 4.

What fraction of the money does Alan receive?

----- [1]



21. Leo, Kush and Mai share some money in the ratio 3 : 5 : 8.

Kush receives £750 more than Leo.

Calculate the total amount of money that they shared.

£ ----- [4]



22. A 100 g packet of tea costs £4.16.
A 25 g packet of the same tea costs £1.05.

Which packet is better value for money?
Show how you decide.

----- [3]



23. There is a total of 250 men, women and children on a train.

The ratio of men to women is 4 : 5.

The ratio of women to children is 10 : 7.

How many men are on the train?

----- [4]

24(a) Lucy and Ben share £42.

Lucy's share is £30.

Write the ratio Lucy's share : Ben's share in its simplest form.

----- [2]

(b). The ratio 2.5 metres to 70 centimetres can be written in the form $1 : n$.

Find the value of n .

$n =$ ----- [2]

END OF QUESTION PAPER

Question		Answer/Indicative content	Marks	Part marks and guidance	
1	a	16	2	<p>M1 for 24/3 or for 8 or for $8 \times 3 = 24$</p> <p>Examiner's Comments</p> <p>A good number of candidates scored full marks. For those who went wrong, a common error was to divide 24 by 5, as if 24 hours were the total number of hours worked rather than just Caroline's hours. Consequently, answers of $2 \times 4.8 = 9.6$ were frequently seen.</p>	Common with Higher
	b	C 15 600 H 10 400	3	<p>B2 for one correct on answer line or for 15 600 and 10 400 seen</p> <p>Or B1 for 15 600 or 10 400 seen</p> <p>Or M1 for 26 000/ <i>their</i> (3 + 2) or for 5200</p> <p>Condone answers reversed on answer line if clearly correct in body of script with correct person (treat as transfer error)</p> <p>Examiner's Comments</p> <p>Candidates were generally less successful in part (b). The most common error was to see 26000 divided separately by 3 and then by 2 giving answers of £8666 and £13 000 (or £17 333).</p>	Common with Higher
		Total	5		
2	a	1 : 50	2	M1 shows a partial simplification	e.g. 4 : 200
	b	50 300	2	M1 for $350 \div (1 + 6)$	

Question			Answer/Indicative content	Marks	Part marks and guidance	
			Total	4		
3			£25	5	<p>M1 for $10 \times \frac{2}{5} = 4$ litres red</p> <p>or</p> <p>$10 \times \frac{3}{5} = 6$ litres white</p> <p>M1 for red costs £8 per litre or white costs £0.50 per litre</p> <p>M1 for cost of one 10-litre can is <i>their</i> '4' \times <i>their</i> '8' + <i>their</i> '6' \times <i>their</i> '0.5'</p> <p>M1 for $60 - \textit{their}$ '35'</p>	<p>Alternative method:</p> <p>M1 for 2 : 3 = 20 litres red : 30 litres white</p> <p>M1 for $2 \times \text{£}80 + 3 \times \text{£}5 = \text{£}175$</p> <p>M1 for $\frac{\textit{their} \text{ '175' }}{5} = 35$</p> <p>M1 for $60 - \textit{their}$ '35'</p>
			Total	5		
4			24 cm by 16 cm 12 cm by 8 cm	2	B1 for each	Answers may be indicated on the list in the question
			Total	2		

Question			Answer/Indicative content	Marks	Part marks and guidance	
5	a		200	1		<p>Examiner's Comments</p> <p>A correct answer was given by a large majority in part (a) although a small number seemed to misread the question giving an answer of 75 or 800.</p>
	b	i	1.8	2	M1 for 400×4.5 or soi by 1800	

Question		Answer/Indicative content	Marks	Part marks and guidance	
	ii	4.25	3 FT	<p>B2 for 15.75</p> <p>Or</p> <p>M1 for $8.75 \times \textit{their} 1.8$ [= <i>their</i> 15.75] and M1 for $20 - \textit{their} 15.75$</p>	<p>Ft <i>their</i> 1800 in kg</p> <p>0 if <i>their</i> 15.75 is more than £20</p> <p><i>Their</i> 15.75 must come from $8.75 \times \textit{“their”} 1.8$</p> <p>Examiner's Comments</p> <p>A correct answer was given by a large majority in part (a) although a small number seemed to misread the question giving an answer of 75 or 800. In (b)(i) most realised that 400 had to be multiplied by 4.5 and were able to complete the calculation correctly. Most did not seem to recognise that they were working in grams and that the answer was required in kilograms thus 1800 was a common answer for 1 mark. Some experienced problems when converting from grams to kilograms, dividing by 10 or 100 was common. Part (b)(ii) was not generally well answered. Many simply subtracted £8.75 from £20 while others despite being a calculator paper rounded 1.8 to 2 and then subtracted £17.50 from £20. The two most common answers were 11.25 and 2.50. Some candidates had a total of more than £20 and often hadn't realised their answer could not be correct.</p>

Question			Answer/Indicative content	Marks	Part marks and guidance
		ii			<p>Examiner's Comments</p> <p>In (i) most realised that 400 had to be multiplied by 4.5 and were able to complete the calculation correctly. Most did not seem to recognise that they were working in grams and that the answer was required in kilograms thus 1800 was a common answer for 1 mark. Some experienced problems when converting from grams to kilograms, dividing by 10 or 100 was common. Part (ii) was not generally well answered. Many simply subtracted £8.75 from £20 while others despite being a calculator paper rounded 1.8 to 2 and then subtracted £17.50 from £20. The two most common answers were 11.25 and 2.50. Some candidates had a total of more than £20 and often hadn't realised their answer could not be correct.</p>
			Total	6	

Question		Answer/Indicative content	Marks	Part marks and guidance	
6		B with three correct figures which can be compared	3	M2 for two correct figures which can be compared or M1 for a correct attempt to make at least two figures comparable	<p>Examiner's Comments</p> <p>The most common calculation for this question was to divide the larger value by the smaller value often resulting in students putting C as their answer. Others divided the smaller by the larger value and more frequently gained full marks. Many scored 2 marks as they produced relevant calculations but clearly did not understand the significance of the figures and opted for the wrong recipe. A large number simply subtracted the quantity of pineapple from the total and gave the answer as the one with the highest value. Whichever method was attempted there was a tendency to write down the biggest number as the answer. A few made fractions out of the numbers but didn't convert to decimals or obtain a common denominator in order to be able to facilitate a comparison. Many just had a guess and put A, B, C as the answer with no working at all.</p> <p>Presentation for this question was generally good with candidates separating the working so that it was logical and relatively easy to follow.</p>
		Total	3		

Question			Answer/Indicative content	Marks	Part marks and guidance	
7			5 : 4 or 1.25 : 1 or 1 : 0.8	2	M1 for 2.7[0] : 2.16 or better <u>After zero scored</u> SC1 for answer 4 : 5	For M1 ignore units <u>Examiner's Comments</u> Most candidates started with 2.7(0) : 2.16 and often made some progress in cancelling the values. Few reduced the ratio to its simplest form. A small number left units in their final answer.
			Total	2		
8			300 450 3 540 6 720	3	B3 for all correct Or B2 for 4 correct Or B1 for 2 correct Examiner's Comments Correct answers for the list of ingredients were the norm. It was apparent, however, that some candidates were working on a recipe for 8 or 12 people rather than 6.	
			Total	3		

Question		Answer/Indicative content	Marks	Part marks and guidance	
9	a	Samira 420 and Joanne 280	3	<p>B2 for one of these correct or M1 for $700 \div 5$ or 140</p> <p>SC2 for answers reversed</p> <p>Examiner's Comments</p> <p>Candidate answers to this part usually scored either 3 or 0. Candidates who understood the method generally got the right values for both rents. A common error was to calculate both of $700 \div 3$ and $700 \div 2$. Some simply guessed giving two apparently random numbers that added to 700.</p>	
	b	210	3	<p>M2 for $5/2 \times 84$ oe or M1 for $84 \div 2$ or 42 or for 126 found</p> <p>Examiner's Comments</p> <p>This part proved difficult for many candidates. Whilst those who divided 84 by 2 often went on to score full marks, a significant number worked on the assumption that 84 was one share instead of 2 and so calculated 84×5.</p>	e.g. M2 for $84 + 42 \times 3$ or $84 + 126$
		Total	6		

Question			Answer/Indicative content	Marks	Part marks and guidance
10			1.25	2	<p>M1 for $2.5 \div 2$</p> <p>Examiner's Comments</p> <p>This question on ratio in the context of mixing screen wash for a car was not well answered. The context appeared to distract from the work with simple ratio and many gave answers of 1.5 or tried to use both the given ratios in their solutions.</p>
			Total	2	
11			7.74 [p]	2	<p>M1 for $12.04 \div 14 \times 9$ oe Or B1 for [1 bottle] = 86[p] oe seen</p> <p>Examiner's Comments</p> <p>This was answered very well with most using the unitary method successfully to calculate the cost of one bottle of lemonade before multiplying by 9. The most common error was to divide 14 by 12.04 when finding the cost of one bottle.</p>
			Total	2	

Question			Answer/Indicative content	Marks	Part marks and guidance	
12			20	1	<p>M1 for 1 part = 4, can be implied by 8</p> <p>Examiner's Comments</p> <p>Many candidates scored full marks but of those who did not, not many scored M1 as they were more used to the method of adding parts of a ratio before dividing. A common mistake was 12/5 instead of 12/3 as was answer 24. Answers in the hundreds were seen, this is a point where candidates need to question whether or not their answer is sensible!</p>	
			Total	2		
13		i	150	1		
		ii	3	2	<p>M1 500×1.5 so i by 750</p> <p>Examiner's Comments</p> <p>Part (i) was generally correct, with the most common incorrect answer being 600. In part (ii), 2 was the common incorrect answer from candidates not scaling the recipe up for 6 people. A lack of method prevented some candidates from gaining credit here.</p>	
			Total	3		

Question			Answer/Indicative content	Marks	Part marks and guidance	
14	a		6	1	Examiner's Comments Recipes are well understood by most candidates and nearly all gave the correct response.	
	b		875	2	M1 for $30 \div 12$ soi or 874.8 seen Examiner's Comments Many tried to get the answer by building on to the given recipe in some way, but only about half the candidates found a method that would lead to a correct response.	874.8 followed by answer of 875 gains 2 marks
	c		48	2	M1 for $80 \div 20$ soi Examiner's Comments Most candidates found a sensible strategy to solve this problem and obtained the greatest number of bread rolls that could be made.	
			Total	5		
15			48	2	M1 for $60 \div (1 + 4)$ or 12 Examiner's Comments There were many correct answers and some gave 12 or even 12:48 as the final answer. The most common incorrect method was to divide 60 by 4 and giving 15 or 45 as the answer, although the division again caused problems for some candidates.	answer of 12:48 or 48:12 implies M1 note: 48 out of 60 scores 2 48/60 scores M1
			Total	2		

Question		Answer/Indicative content	Marks	Part marks and guidance	
16	a	240	1	<p>Examiner's Comments Parts (a) and (b) were well answered with a few errors. Many also provided an accurate method in part (c), with a valid calculation and a correct statement to score full marks. The most popular routes appeared to be $550 \div 6 \times 15$ and $550 + 550 + 275$ to obtain 1375g, although it was quite common to see the miscalculation of $550 \div 2$ as 225. An alternate method was to work out that there were only enough apples to make crumble for 14.1... people. Some worked out correct values, but were unable to interpret correctly and lost the final mark. Many of the weaker candidates scored at least 1 mark for 1300g, but there was a minority who offered incorrect work, or no work.</p>	
	b	10	1		

Question		Answer/Indicative content	Marks	Part marks and guidance		
	c	No, with correct supporting values and justification	4	<p>B3 for 1.374 to 1.38 [kg] or 1374 to 1380[g] or 74 to 80[g] or 0.074 to 0.08 [kg] or 14[...people]</p> <p>OR</p> <p>B1 for 1.3×1000 soi by 1300 or <i>their</i> $1375 \div 1000$ and</p> <p>M1 for $15 \div 6$ soi by 2.5 or $550 \div 6$ soi by 91.6[6] or 91.7 and</p> <p>M1 for $550 \times 2.5 = 1375$ or $1300 \div \textit{their} 91.6[6]$ or <i>their</i> $91.6[6] \times 15$</p>	Accept equivalent method	
		Total	6			

Question		Answer/Indicative content	Marks	Part marks and guidance	
17	a	3 cao	1	<p>Examiner's Comments Many correct answers were seen in part (a). Errors tended to reflect a lack of understanding of the question rather than an inability to convert 1 hour to minutes. Several candidates failed to score. Common errors were 20 and 60. Fully correct answers to part (b) were rare, but a large majority correctly multiplied 25 000 by 6 to give 150 000 for 1 mark. Most gave answers beginning '15...', but not with the correct place values. Many answered part (c) correctly; the most common incorrect answer was $\frac{6}{7}$.</p>	
	b	$\frac{6}{13}$	1		
		Total	2		

Question		Answer/Indicative content	Marks	Part marks and guidance			
18		<p>A - Yes with appropriate reasoning involving rounding and correct simplification to 3 : 8 or 3 : 11 or 8 : 11 or ratios reversed OR</p> <p>B - Yes it is approximately correct oe and simplification of 6400 : 16200 to 32 : 81 OR</p> <p>C - Yes with a correctly evaluated calculation using e.g. ratio 3 : 8 with a comparison comment OR</p> <p>D - Yes and e.g. $16200 \div 8$ and $6400 \div 3$ correctly evaluated</p>	3	<p>M2 eg for showing 6000 : 16000 and reducing to 3 : 8 or for appropriate rounding at some stage in correctly simplifying ratio leading to 3 : 8 isw</p> <p>or reduces 6400 : 16200 to 32 : 81 isw</p> <p>or reduces 6400 : 22600 to 32 : 113 isw</p> <p>or for ratio calculation leading to one of the following values seen 6075, 6163 to 6165, 16436 to 16440, 17066 to 17067 or 22275 or 23463 to 23467 seen isw</p> <p>or for 2025 and 2133 to 2134 seen isw</p> <p>or 2025 and 2054 to 2055 seen isw</p> <p>or 2133 to</p>	<p>For all marks accept method with equivalent fractions or decimals [3sf or better] Allow equivalent methods working with the totals e.g. 3 : 11, condone 22600 rounded to 22000 For 3 or M2, allow clear 'reverse' methods working from e.g. 3 : 8 to 6000 and 16000 Accept clear working if not in ratio form e.g. 3.2 and 8.1 shown not in ratio</p> <p>The figures in the part marks column are guidance on accuracy required for 3 marks or M2</p>		

Question	Answer/Indicative content	Marks	Part marks and guidance
			<p>2134 and 2054 to 2055 seen isw</p> <p>Or M1 for 6000 or 16000 or 20000 or 22000 or 23000 seen or for appropriate rounding of one number at some stage in simplifying ratio or for intention to</p> <p>SEE APPENDIX B</p> <p>find $\frac{3}{8}$ of 16200</p> <p>or for $\frac{8}{3}$ of 6400 or $\frac{3}{11}$ of (16200 + 6400) or $\frac{8}{11}$ of (16200 + 6400) isw</p> <p>or for 6400 ÷ 3 and one of 16200 ÷ 8 or (6400 + 16200) ÷ 11 seen isw or 16200 ÷ 8 and (6400 + 16200) ÷ 11 seen isw</p>

Question			Answer/Indicative content	Marks	Part marks and guidance	
					<p>Examiner's Comments Many found this question very difficult and a number of candidates did not attempt this question; responses often suggested little idea as to how to get started and it was very rare to see candidates linking this question with estimation. Approximating to 6000 : 16000 at the beginning was never seen. Some were able to reduce 6400: 16200 to 32: 81, but then reached the conclusion that Katie was incorrect because this ratio could not be reduced to 3: 8 or didn't give a decision. Other good attempts involved calculating $16200 \div 8$ and $6400 \div 3$, but often the working contained errors. A very common error was to divide 16 200 or 6400 by 11. Other candidates simply added or subtracted the two given values. Insecure arithmetic skills also added to problems for candidates, particularly when not estimating. A few did not understand the working of the question and often stopped after $16200 + 6400$ or $16200 - 6400$.</p>	
			Total	3		

Question		Answer/Indicative content	Marks	Part marks and guidance		
19	a	22 : 15	2	<p>M1 for any equivalent ratio or for two correct ratios with a common number of children seen implied by $22k$ and $15k$ seen ($k > 1$ and an integer)</p> <p>Or for $\frac{11}{3} : \frac{5}{2}$ or for 11 : 7.5</p>	<p>15k : 22k implies M1</p> <p>Accept 3.66 to 3.67 : 2.5</p>	
				<p>Examiner's Comments Most candidates seemingly did not know to connect the two ratios through finding a common number of children, hence very few were able to use the two given ratios to find the ratio of men: women. It was common to see the totals 14 and 7 and then attempts to work with these to get a ratio (often 2 : 1). The most common answer was 11 : 5, from taking the values for men and women from the given ratios. Despite problems with part (a), more candidates were able to attempt part (b) and a few got to the correct answer. Methods were very confused, but many were able to calculate either the number of men or women correctly. Occasionally 18×5 and 12×11 were shown, but errors were then made when attempting to evaluate.</p>		

Question			Answer/Indicative content	Marks	Part marks and guidance	
	b		258	3	<p>M2 for $\frac{36}{2} \times 5 + \frac{36}{3} \times 11$ [+36] oe</p> <p>or $((2 \times 11) + (3 \times 5)) \times 36 \div 6$ [+36] oe</p> <p>or $\frac{6}{6+15+22} \times 36$ oe</p> <p>or M1 for $\frac{36}{2} \times 5$ or $\frac{36}{2} \times 7$ soi</p> <p>or $\frac{36}{3} \times 11$ or $\frac{36}{3} \times 14$ soi oe</p>	<p>M2 implied by 222 [+36] not spoiled</p> <p>90 + 132 [+36]</p> <p>Implied by 90 or 126 or 132 or 168 seen</p>
			Total	5		

Question		Answer/Indicative content	Marks	Part marks and guidance
20		$\frac{1}{5}$ or equivalent fraction	1	<p>Ignore attempts to simplify if, for example, $\frac{10}{50}$ given.</p> <p>Must be a vulgar fraction not 0.2 or 20%</p> <p>Examiner's Comment This part seemed to be split fairly evenly between the correct answer of $\frac{1}{5}$ and the incorrect $\frac{1}{4}$. A few examples of $\frac{4}{5}$ were seen.</p>
		Total	1	

Question		Answer/Indicative content	Marks	Part marks and guidance	
21		6000	4	<p>B3 for 1125, 1875 and 3000 OR M3 for 750 $\div 2 \times$ their (3+5+8) OR M2 for 750 $\div 2 \times 3$ or $750 \div 2 \times 5$ or $750 \div 2$ $\times 8$ OR M1 for 750 $\div 2$ soi by 375</p> <p>If 0 scored SC2 for $750 + 1250$ $+ 2000 =$ 4000 or 450+ $750 + 1200$ $= 2400$</p> <p>OR SC1 for 750,1250, 2000 or 450, 750, 1200</p> <p>OR SC1 for [Leo] \times [Kush] $\times +$ 750 [Mai] $2x + 750$ and totals to $4x +$ 1500</p>	
				<p>Examiner's Comments</p> <p>This question caused significant difficulty for the majority of candidates.</p>	

Question			Answer/Indicative content	Marks	Part marks and guidance
					<p>Efficient and clearly laid out solutions were the sole preserve of the highest achieving candidates. A minority used bar models, but those who did were usually successful in establishing that the difference of 750 related to '2 shares'; in most cases these candidates were able to go on to establish the correct values for each person. Some candidates appeared to be using trial and improvement in their calculators. These were often able to give a set of values that fitted the criteria of Kush having 750 more than Leo and Mai having an amount equal to the combined total for Kush and Leo, however few seemed clear on how to check whether these values were in the given ratio.</p>
			Total	4	

Question		Answer/Indicative content	Marks	Part marks and guidance		
22		100 gram packet with a correct comparison ISW	3	<p>M1 for correctly finding the cost of 1 gram, 25 grams, 100 grams or other amount suitable for comparison</p> <p>and</p> <p>M1 for attempting to find the cost of the same amount of tea for each packet weight (eg 25 grams or 100 grams) evaluation does not need to be correct</p>	<p>eg 100g of 25g pkt costs [£]4.2[0] eg 25g of 100g pkt costs [£]1.04 other comparisons must be correct to 3sf or better</p> <p>Or for attempt to find two values of grams per pound or grams per pence</p>	
				<p>Examiner's Comments</p> <p>Many correct answers were seen with clearly set out working. Most used $£1.05 \times 4$ for comparison and provided a statement choosing the 100 g packet often with a reason why. Finding 25 g of the large packet also worked well but other comparisons proved too difficult to calculate so those attempting pence per g or grams per £ or p often went wrong, or they rounded to too few</p>		

Question			Answer/Indicative content	Marks	Part marks and guidance	
					significant figures. Some candidates made the error of calculating 1.05×5 so a comparison of the same amount of tea was not provided.	
			Total	3		

Question		Answer/Indicative content	Marks	Part marks and guidance	
23		80	4	<p>M3 for $250 \div (8k + 10k + 7k) \times 8k$ oe</p> <p>or M2 for $250 \times (8k + 10k + 7k)$ oe</p> <p>or M1 for two ratios with a common number of women implied by $8k$ (men) and $7k$ (children) seen, $k > 0$ or for $8 : 10$ [: 7] or [4 :] $5 : 3.5$ seen</p>	<p>M3 implied by 80, 100, 70 with 80 not selected</p> <p>e.g. 0.8 and 0.7, 4 and 3.5</p>
		Total	4		

Examiner's Comments

Few candidates were able to make any progress with this question as they did not start by writing ratios with a common number of women. A small number of candidates reached a ratio such as $8 : 10 : 7$, but then very few understood how to use this to reach the correct answer. It was more common to see candidates not linking the ratios together correctly but just adding some or all of the ratio values and attempting to divide 250 by 9, 17 or 26.

Question		Answer/Indicative content	Marks	Part marks and guidance		
24	a	5 : 2	2	<p>B1 for 30 [:] 12 oe</p> <p>If 0 scored SC1 for 5 : 7 or 2 : 5</p> <p>Examiner's Comments</p> <p>Part (a) was often correctly answered. A few candidates made the error of writing Lucy's share : total. Those who could correctly cancel this to 5 : 7 scored one SC mark. Many who could not cancel a ratio, scored 1 mark for correctly writing 30 : 12.</p>	<p>Condone same units in ratios B1 for 15 : 6 or 10 : 4 or 2.5 : 1 or 1 : [0].4 may miss ratio signs</p>	
	b	[0].28	2	<p>B1 for 250 or [0].7 seen or 2500 and 700 or figs 28 in answer</p> <p>If 0 scored SC1 for [1:] 3.57[1...]</p> <p>Examiner's Comments</p> <p>Part (b) was very poorly answered. Few could write 2.5 m and 70 cm in common units. The candidates who knew how to reduce a fraction to the form 1 : ...scored 1 mark for having 28 in their answer.</p>	<p>Condone answer 1 : [0].28 for B2</p>	

Question			Answer/Indicative content	Marks	Part marks and guidance
			Total	4	