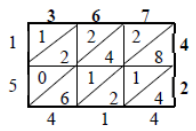
1	14	M1 A1	for 42 ÷ 3 cao	

2	No with correct figures	P1 P1 A1	for 1.20 + 0.70 + 2.30 + 2.30 (= 6.5(0)) **or** for adding 3 correct costs **or** for 2 correct costs plus change **or** for 10 – 2 correct costs for a complete correct method, eg 10 – "6.50" **or** 10 – 1.20 – 0.70 – 2.30 – 2.30 (=3.50) **or** 1.20 + 0.70 + 2.30 + 2.30 + 3.30 (=9.80) for No with correct figures, eg 3.5(0) **or** 9.8(0)	Could work in £ or p for P marks Accept 2.30 + 2.30 (= 4.60) as 2 costs Accept absence of "0" in pence column

3	7	P1 A1	for process to find temperature on Wednesday, eg 5 – 10 + 3 (= –2) **or** –10 + 3 **or** 10 – 3 for 7, accept –7	Be aware of correct use of a number line

4	3.3(0)	P1 P1 P1 A1	for a process to find cost of 1 kg of carrots, eg 1.80 ÷ 3 (= 0.60) for a start to a process to find cost of 1kg of potatoes, eg 3.45 – 2 × "0.60" (= 2.25) **or** (1.80 + 3.45) ÷ 5 (= 1.05) **OR** for a process to find the cost of 4 kg of carrots, eg "0.60" × 4 (= 2.40) (dep on P2) for a complete process to find the cost of 4 kg of carrots **and** the cost of 2 kg of potatoes, eg "0.60" × 4 (= 2.40) **and** ("2.25" ÷ 5) × 2 (= 0.90) **or** "0.60" × 4 (= 2.40) **and** ("1.05 – "0.60") × 2 (= 0.90) cao	Could work in £ or p for P marks Condone incorrect money notation 1 kg of potatoes = (£)0.45 or 45p Award 0 marks for a correct answer with no supportive working.

5 (a)	15.414	M1 A1 A1	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. for digits 15414 (ft) dep on M1 for correct placement of the decimal point into their final answer	14680 734 15414  | | 300 | 60 | 7 | | 40 | 12000 | 2400 | 280 | | 2 | 600 | 120 | 14 | 12000 + 2400 + 280 + 600 + 120 + 14 = 15414
(b)	37.4	M1 A1 A1	for a start to a method, eg 598.4 ÷ 16 (or 59.84 ÷ 1.6) = 3 (as a first digit) for digits 374 (ft) dep on M1 for correct placement of the decimal point into their final answer	A start to a repeated subtraction method or build-up method is acceptable if a correct first digit of 3 is found

6	2540 shown	M1 M1 A1	for finding the cost of one item eg 2 × 600 (=1200) or 7 × 120 (=840) or 2 × 250 (=500) full process eg "1200" + "840" + "500" (=2540) **or** 2500 – "1200" – "840" – "500" (= ±40) for 2540 or ±40	Ignore written statements as long as the correct figures are shown

7	(b)	947.2	B1	cao	

8	29	P1 P1 A1	for a start to a process, eg. (total apples =) 86 + 75 + 92 (= 253) or (total oranges =) 68 + 80 + 76 (= 224) **or** differences each week, eg. (week 1) 86 – 68 (= 18) or (week 2) 75 – 80 (= – 5) or (week 3) 92 – 76 (= 16) for complete process, eg "253" – "224" **or** "18" + "– 5" + "16" cao	

9	5	M1 A1	for 40.15 or 8.03 seen in working cao	

10	4	B1	cao	

11	60	P3 (P2 (P1 A1	for complete process to find the total costings eg 23 + 33 + 24.5(0) + 24.5(0) + 15 + 10 + 10 (= 140) **or** for a complete process to find the total money left, eg. 200 – 23 – 33 – 24.5(0) – 24.5(0) – 15 – 10 – 10 (= 60), condone one error, eg one omission or one additional cost for process to find the total cost of all theme park tickets, eg 33 + 2 × 24.5(0) (= 33 + 49 = 82) **or** for process to find the total cost of all meals, eg 15 + 2 × 10 (= 15 + 20 = 35) **or** for process to find the total cost for the children, eg 2 × 24.5(0) + 2 × 10 (= 49 + 20 = 69) **or** for process to find total costs with just **one** child, eg 23 + 33 + 24.5(0) + 15 + 10 (= 105.5(0))) for a start to a correct process, considering at least 2 costs eg 33 + 24.5(0) (= 57.5(0)) or 2 × 24.5(0) (= 49) **or** for start to a process to find money left, eg 200 – 23 (= 177) or 200 – 33 (= 167)) cao	All processes may be seen as part of subtractions to find money left Additions may include other elements for process marks, eg. 23 + 33 + 2 × 24.5(0) May be any start to a correct process

12	(a)	5	P1 A1	for correct process, eg 23 ÷ 4 (= 5.75) **or** adds 4s up to at least 20 **or** repeatedly subtracts 4 up to a remainder of less than 4 cao	
	(b)	No (supported)	C1	for No with reason **Acceptable examples** Can buy 11 jars Can buy an extra jar (for the £3 extra) Can buy 10 jars for £20 He will have £3 left Because he can buy more than twice the number of jars Because 23 ÷ 2 = 11.5 **Not acceptable examples** Yes ….. Can buy 10 / Can buy 12	

13	(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

14	49.01	P1	for process to work with the number of miles, eg 12845 – 12468 (= 377) **or** 12845 × 13 (= 166985) **or** 12468 × 13 (= 162084)	
		P1	for process to find the cost, eg "377" × 13 (= 4901) **or** "166985" – "162084" (= 4901)	
		B1	(indep) for converting from pence to pounds, eg "4901" ÷ 100 **or** 13 ÷ 100 **or** miles divided by 100 eg "377" ÷ 100 (= 3.77) or 12845 ÷ 100 (= 128.45) **and** 12468 ÷ 100 (= 124.68)	This mark can be awarded at any stage in the process
		A1	49 or 49.01	

15	315	M1	for 45 × 7	
		A1	cao	

16	145.60	P1	for a process to work out the value of the large bars eg 208 ÷ 4 (=52 or 5200)	units may be ignored for the process marks
		P1	for a process to work out the value of the small bars eg (208 – "52") × 60 or $(1 - \frac{1}{4}) \times 208 \times 60$ (=9360 or 93.6(0)) **or** for 145.6	work could be in pence or £
		A1	for 145.60 cao (must be correct money notation)	
17 (a)	102	B1	cao	

18	22	P1	for process to find total choosing German eg 200 – 104 – 70 (=26)	for process to find girls choosing French (44) or total number of girls (110)	
		P1	for complete process to find boys choosing Spanish eg 90 – (60 + ("26" – 18))	for complete process to find boys choosing Spanish eg 70 – ("110" – "44" – 18)	
		A1	cao		

	F	S	G	total
girls	**44**	**48**	18	**110**
boys	60	**22**	**8**	90
total	104	70	**26**	200

19	158	P1	for a first step in the process eg 50 × 167.6 (=8380) or 20 × 182 (=3640)	
		P1	for a complete process eg (50 × 167.6 – 20 × 182) ÷ 30 or $\frac{8380 - 3640}{30}$ or 4740 ÷ 30	
		A1	cao	

20	−4	B1	cao	

21	Yes (supported)	P1	for an initial process, eg 6×2 (=12) **or** $80 \div 2$ (=40 = 0.40) oe **or** 6×0.8 (= 4.80) oe **or** $6 \div 2$ (= 3)	May work in pounds or pence
		P1	for a process using the special offer eg $6 \times$ "40" (= 240 or 2.40) oe **or** "4.80" $\div 2$ (= 2.40) oe **or** 2 + "0.40" (= 2.40) oe **or** "3" $\times 0.8$ (= 2.40)	Allow use of inconsistent units for the first 2 marks
		P1	for a complete process to find figures to compare, eg $6 \times 2 + 6 \times$ "0.40" (= 14.40) oe **or** 15 – "12" – "2.40" (= 0.60 or 60p)	
		C1	for Yes with correct comparable figures, eg Yes **and** (£)14.4(0) **or** Yes **and** (£)0.6(0) or 60p change	Award 0 marks for a correct answer with no supportive working. Answer of 'No' gets C0 irrespective of working, correct or not. Ignore incorrect value for change, if (£) 14.4(0) seen

22	(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)

23	$\frac{5}{14}$	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	

24	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

25 (a)	6	B1	cao	
(b)	14 00	M1	for use of graph to find the maximum time paid for, eg £9.00 = 6 hours	May be seen on graph
		M1	for intention to add times, eg 08 00 + "6" hrs	8, 9, 10, 11, 12, 1 is enough to show a clear intention to add For method marks condone use of incorrect time notation
		A1	for 14 00 or 2 pm	Correct time notation required

26	Shown	M1	for at least three of 40 × 1 (= 40), 50 × 2 (= 100), 60 × 4 (= 240), 70 × 5 (= 350), 80 × 3 (= 240), 90 × 1 (= 90) oe	Intention to multiply is enough for award of M1 May be seen as repeated addition
		M1	(dep M1) for a complete method to find comparable figures (allow up to 2 errors in their products), eg 40 × 1 + 50 × 2 + 60 × 4 + 70 × 5 + 80 × 3 + 90 × 1 oe or for 1200 − 40 × 1 − 50 × 2 − 60 × 4 − 70 × 5 − 80 × 3 − 90 × 1 oe	
		A1	for accurate comparable figures, eg 1060 or 140	Condone incorrect difference if 1060 is clearly seen

27	Yes (supported)	P1	for starting a process of working with time eg for undertaking some time conversion eg 85 mins is 1 hr 25 mins, 1 hr 45 min is 105 mins **or** for recognition that 1 h = 60 min (eg 85 = 60 + 25)	Time conversion may be implied by a correct addition over the hour eg 8.30 + 1h 45m = 10.15, 10.30 + 85 = 11.55 Can be shown at any stage.
		P1	for a correct addition of at least two times eg 15 + 85 =100 **or** a correct duration eg 8 30 + 1 h 45 m = 10 15 **or** a correct subtraction eg 12 (noon) – 15 = 11 45	A correct duration can be shown using their times for any of the stages. Subtraction of any of the time durations
		P1	for a complete process to justify the decision eg 8 30 + 1 hr 45 min + 85 + 15 (= 11 55) **or** 105 + 15 + 85 (=205 min) **and** 12 (noon) − 8 30 (= 210 min)	Accept their figures for 1 hr 45 min, 85 etc as long as it is clear they are related.
		C1	Yes **and** accurate figures eg 11 55 **or** 205 **and** 210	

28	13	P1	for beginning to process problem eg 72 – 7 (= 65) **or** writing $5x + 7 = 72$ oe	
		P1	for a complete process eg "65" ÷ 5 oe **or** writes $5x = 65$ oe	
		A1	cao	

29 (a)	11533	P1	for working with 68%, eg 800 × 0.68 (= 544 people) oe or "16960" × 0.68 oe	Percentage calculation could be done at any stage
		P1	for a correct process, other than that of finding a %, eg "544" × 2 (= 1088) or 10.6 × 2 (= 21.2) or 800 × 2 (= 1600) or "544" × 10.6 (= 5766.4) or 800 × 10.6 (= 8480)	
		P1	for full process to find amount of coffee required eg "1088" × 10.6 or "544" × "21.2" or "5766.4" × 2 (= 11532.8) or for an answer of 11532	
		A1	for answer in the range 11532.5 to 11533	If a correct answer within the range is shown in working but incorrectly rounded award full marks.
(b)	Statement	C1	for a correct statement **Acceptable examples** the amount will be more; he will need more coffee it is an underestimate my answer in part (a) means there would not be enough for everyone he will need 12211(.2); needs 678(.4) more **Not acceptable examples** amount will decrease, amount of coffee will change	If figures are given as part of the answer they must be correct, but can allow ft.

30	65	P1 P1 A1	for a correct process to find the number of seconds, eg 67 205 600 ÷ 11.9 (= 5 647 529.4...) **or** for a correct process to convert between seconds and days, eg 24 × 60 × 60 (= 86 400) oe, may be seen in stages or 11.9 × 60 × 60 × 24 (= 1 028 160) for a complete process, eg "5 647 529.4..." ÷ "86 400" or 67 205 600 ÷ "1 028 160" accept answers in the range 65 to 65.4 or 66	Note that this mark may be awarded at any stage in the working. If a correct answer within the range is shown in working but incorrectly rounded award full marks.