Q1. A company sends every item of mail by second class post.
Each item of mail is either a letter or a packet.

The tables show information about the cost of sending a letter by second class post and the cost of sending a packet by second class post.

.etter

Weight range	Second Class
0–100g	32p

'acket

Weight range	Second Class
0–100g	£1.17
101–250g	£1.51
251–500g	£1.95
501–750g	£2.36
751–1000g	£2.84

The company sent 420 items by second class post.
The ratio of the number of letters sent to the number of packets sent was 5 : 2.

$\frac{2}{3}$ of the packets sent were in the weight range 0 – 100 g.

The other packets sent were in the weight range 101 – 250 g.

Work out the total cost of sending the 420 items by second class post.

£ .....

(Total 5 marks)

Q2. Jon and Alice are planning a holiday.
They are going to stay at a hotel.

The table shows information about prices at the hotel.

	Price per person per night (£)		**Dinner (£)**
	Double room	**Single room**	**per person per day**
01 Nov – 29 April	59.75	118.00	31.75
30 April – 08 July	74.25	147.00	31.00
09 July – 29 Aug	81.75	161.75	31.00
30 Aug – 31 Oct	74.25	147.00	31.00
Saver Prices 5 nights for the price of 4 nights from 1st May to 4th July. 3 nights for the price of 2 nights in November.			

Jon and Alice will stay in a double room.
They will eat dinner at the hotel every day.

They can stay at the hotel for 3 nights in June or 4 nights in November.

Which of these holidays is cheaper?

(Total 5 marks)

M1.

Working	Answer	Mark	Additional Guidance
420 ÷ 7 = 60 5 × 60 = 300 2 × 60 = 120 120 ÷ 3 × 2 = 80 0.32 × 300 + 1.17 × 80 +1.51 × 40 96 × 93.60 + 60.40	250	5	**M1** for 420 ÷ (5 + 2) or 60 seen **M1** (dep) for 5 × '60' or 2 × '60' or 300 or 120 seen **M1** for '120' ÷ 3 × 2 oe **M1** for 32p × '300' + £1.17 × '80' + £1.51 × '40' **A1** for 250.00 or 250 SC B1 for £539
			Total for Question: 5 marks

M2.

Working	Answer	Mark	Additional Guidance
3 × 2 × 74.25 + 3 × 2 × 31 3 × 2 × 59.75 + 4 × 2 × 31.75	631.50, 612.50 so November cheapest with reason given	5	**M1** for at least one correct dinner cost calculation 3 × 2 × 31 or 4 × 2 × 31.75 **M1** for at least one correct room cost calculation 3 × 2 × 74.25 or 3 × 2 × 59.75 OR M2 for at least one combined room and dinner calculation 2 × 3 × (31 + 74.25) or 2(3 × 59.75 + 4 × 31.75) AND **A1** for 631.5(0) **A1** for 612.5(0) **C1** ft holiday identified QWC: Decision must be stated and total costs must be attributable from both calculations consistent for 2 people. **Alternative** **M1** for at least one correct dinner cost calculation 3 × 31 or 4 × 31.75 **M1** for at least one correct room cost calculation 3 × 74.25 or 3 × 59.75 OR **M2** for at least one combined room and dinner calculation 3 × (31 + 74.25) or (3 × 59.75 + 4 × 31.75) AND **A1** for 315.75 **A1** for 306.25 **C1** ft holiday identified QWC: Decision must be stated and total costs must be attributable from both calculations consistent for 1 person.
			Total for Question: 5 marks

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Thirty per cent of candidates were awarded full marks for their response to this question. Unfortunately, a surprising number of candidates did not take into account the ratio of the number of letters to the number of packets thereby simplifying the question. These candidates could be given little credit for their attempts as they restricted their working to finding a simple fraction of a quantity followed by the calculation of a simple bill. Candidates who did realise the significance of the ratio often failed to show their working in a coherent way. This may have inhibited their ability to think through the processes involved and execute them accurately in the correct logical sequence.

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There were some fully correct answers here. However considering candidates should have been prepared to be assessed for the quality of their written communication on this asterisked question, the response was very disappointing. Often it was left to the examiner to decide whether a calculation was for June or November, and circling a final answer is not considered worthy of a communication mark for choosing the cheapest option. Similar questions have been seen before on preparation material so centres need to prepare their candidates for this type of question. This question requires good organisation in order to correctly calculate consistently and to clearly communicate the answer.

One of the biggest problems was the failure to read or understand the tariff within the table of information given. This resulted in numerous inconsistencies. The most common mistake was taking the room charge quoted as per room not per person so ending up with costs that were a mixture of one and two people, even more prevalent was the failure to take into account the offer of 3 nights for the price of 2 in November e.g. candidates often got the calculation correct for June, £631.50, but then ignored the fact that in November you got 3 nights for the price of 2 and still just did (4 x 2 x 59.75) + (4 x 2 x 31.75) = £732. A few also assumed that the meals were 3 for the price of 2 as well. A few used the same hotel price or the same meal price in error in their calculations – i.e. used £31 for the meals both in June and November.

Despite this being a calculator paper arithmetical errors were very common. Additionally pupils added extra calculations for other visit periods, not detailed in the question or talked about best value instead of giving the cheapest option.

It is imperative that pupils answer the question asked with clear calculations to support their conclusions in order to be successful at this type of question.