8. A window replacement company employs a programmer to write a program that calculates how much it will cost to fit triple glazed windows.

Small windows cost £299.99 and large windows cost £499.99 to replace.

The algorithm to calculate the cost is shown below.

1. Set totalCost to 0
2. Ask for number of rooms
3. Loop through the number of rooms
4.   Ask for the number of small windows
5.   Ask for the number of large windows
6.   Calculate and update totalCost
7. End loop
8. Display totalCost

(a) Step 6 in the algorithm calculates and updates the total cost.

Using a programming language of your choice, write the code for step 6. **4**

[Turn over

8. (continued)

(b) The total cost should be output as shown below.

> The cost is £14999.50 for the windows

Using a programming language of your choice and the variable name `totalCost`, write the code to produce the output above.

2

(c) A hotel wants to replace 114 windows.

Convert this denary number to 8-bit binary.

1