7 An algorithm has been written in pseudocode to:

- input a whole number between 1 and 255 inclusive
- convert the input to an 8-bit binary number
- store each bit of the binary number in an array.

For example, if the denary number 127 was input, the binary number 01111111 would be stored in the array.

```
01  DECLARE BinaryArray : ARRAY[1:8] OF INTEGER
02  DECLARE DenaryNumber : CHAR
03  OUTPUT "Please enter a whole number between 1 and 255 inclusive "
04  INPUT DenaryNumber
05  FOR Count ← 7 TO 1 STEP -1
06      BinaryArray[Count] ← MOD(DenaryNumber,3)
07      DenaryNumber ← DIV(DenaryNumber,2)
08  NEXT Count
```

(a) Identify the line numbers of the **three** errors in the pseudocode and suggest a correction for each error.

Error 1 line number .....

Correction .....

.....

Error 2 line number .....

Correction .....

.....

Error 3 line number .....

Correction .....

.....

[3]

(b) Identify **one** programming technique used in the algorithm.

..... [1]

(c) **(i)** The algorithm can accept a number between 1 and 255 inclusive as input.
Two validation checks that could be applied to `DenaryNumber` are a presence check and a type check.

Identify **one** other validation check that could be applied to `DenaryNumber`

..... [1]

(ii) Write the pseudocode to implement the validation check you identified in **(c)(i)**.

You do **not** need to rewrite the whole algorithm.

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..... [3]