

- 6 The energy efficiency of an electrical appliance is the percentage of useful energy out compared with the total energy in.

An algorithm has been written in pseudocode to calculate the energy efficiency of an appliance. Values for total energy in and useful energy out are input. The efficiency is calculated and output as a percentage.

The entry of the number -1 for either value stops the algorithm.

```
01 REPEAT
02     OUTPUT "Enter total energy in "
03     INPUT TotalEnergyIn
04     OUTPUT "Enter useful energy out "
05     OUTPUT UsefulEnergyOut
06     IF TotalEnergyIn <> -1 AND UsefulEnergy <> -1
07         THEN
08             Efficiency ← (UsefulEnergyOut / TotalEnergyIn) * 100
09             OUTPUT "Efficiency is ", Efficiency, "%"
10         ENDIF
11 UNTIL TotalEnergyIn <> -1 OR UsefulEnergyOut <> -1
```

- (a) Identify the **three** errors in the pseudocode and suggest corrections.

Error 1

Correction

Error 2

Correction

Error 3

Correction

[3]

- (b) Write pseudocode to check for an efficiency of 92% or over for this appliance and to output "A-rated" if the efficiency is 92% or over.

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[2]