

Comp Sci – Error Finding - Answers

2	1 mark for each error identified with effective corrective action 01 Num18 = 0 02 INPUT Age 03 WHILE Age >= 0 DO 04 IF Age >= 18 THEN 05 Num18 = Num18 + Age 06 END IF 07 END WHILE 08 PRINT Num18 - Age Error – Line 04 or IF Age >= 18 and Correction – IF Age >18 Error – Line 05 or Num18 =Num18 + Age and Correction – Num18 = Num18 + 1 Error – Line 08 or PRINT Num18 - Age and Correction – PRINT Num18 Error – INPUT Age missing inside loop and Correction – Include INPUT Age after test and before exiting loop	4
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2	1 mark for each error identified + suggested correction Line 1 or Small = 0: this should read Small = 999 line 5 or IF...: this should read IF Num < Small THEN Small = Num line 8 or UNTIL: this should read UNTIL Counter = 10 or UNTIL Counter > = 10 or UNTIL Counter > 9 line 7 or PRINT...: PRINT Small should come after the end of the repeat loop or line 8 or UNTIL: this should come before line 7	[4]
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2 1 mark for each error identified + suggested correction

Line 1 or Large =9999: this should read **Large = 0**
Line 3 or WHILE: this should read **WHILE Counter < 30**
line 6 or IF: this should read **IF Num > Large THEN Large = Num**
line 7 or Counter =...: this should read **Counter = Counter + 1**

[4]

2 (i) 1 mark for each change

Change variable name in every instance as needs to be meaningful e.g. Large
Set this variable to a low value
line 5: change comparison from < to >

[3]

(ii) 3 marks maximum, 1 mark for each change correctly included.

```
1 Large = 0
2 Counter = 0
3 REPEAT
4     INPUT Num
5     IF Num > Large THEN Large = Num
6     Counter = Counter + 1
7 UNTIL Counter = 10
8 PRINT Large
```

[3]

2 (i) 1 mark for each improvement

use FOR ... NEXT instead of REPEAT ... UNTIL
Move PRINT to after the end of the loop
Add error checking to check that the value input is positive

[3]

(ii) 3 marks maximum, 1 mark for each improvement correctly included.

Sample answer below

```
1 Total = 0
2 FOR Counter = 1 To 10
3     REPEAT
4         INPUT Num
5     UNTIL Num > 0
6     Total = Total + Num
7 NEXT Counter
8 PRINT Total
```

[3]

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Question	Answer	Marks
2	<p>1 mark for each error identified and suggested correction (the corrected code must be written in full)</p> <p><i>Line 2 Correct code</i> Counter = 0 (1)</p> <p><i>Line 7 Correct code</i> Total = Total + Number // Number + Total (1)</p> <p><i>Line 8 Correct code</i> Counter = Counter + 1 // 1 + Counter (1)</p> <p><i>Line 10 Correct code</i> Average = Total / Counter // Average = Total / 50 (1)</p>	4

- 2 One mark for each error identified + suggested correction**
 line 4 or (Total =) Total + 1: this should read (Total =) Total + Num
 line 5 or Counter = Counter + 1: delete this line
 line 6 or (Average =)Total / Counter: swap lines 6 and 7
 line 6 or (Average =)Total / Counter : this should read (Average =) Total / 50
- [4]

- 2 One mark for each error identified + suggested correction**
 line 5 or IF Num < 0: this should read IF Num > 0 (THEN Total = Total + Num)
- line 6 or (IF Num > 0) THEN Counter = Counter + 1:
 this should read (IF Num > 0 THEN) Poscount = Poscount + 1
- line 7 Average = Total/Poscount: this should come after the end of the repeat loop
- line 9 or PRINT Num: this should read PRINT Average
- [4]

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- 2 (a) 1 mark for each change
- Line 2: `OutRange = 0`
 - Line 6: should be `OutRange = OutRange + 1`
 - Line 7: not needed
 - Line 8: `NEXT X` should be `NEXT Count` / Line 3: `FOR Count = 1 TO 10` should be `FOR X = 1 TO 10` [4]

(b)

Number	Within range (✓)	Outside range (✓)	Reason
10		✓	Range greater than 10, so 10 not included
20		✓	Range less than 20, so 20 not included

[4]

- 2 1 mark for identifying each error, 1 mark for the corresponding change

- line 2 or `Counter = 100`
- `Counter = 0`
- line 6 or `UNTIL Num < 0`
- `UNTIL Num >= 0`
- line 7 or `Total = Total + 1`
- `Total = Total + Num`
- line 8 or `Counter = Counter + Num`
- `Counter = Counter + 1`

[8]

Question	Answer	Marks
2	<p>1 mark for each error identified plus suggested correction (the corrected lines must be written in full)</p> <p>Line 4 correct line <code>WHILE Number <= 99 OR Number > 1000</code></p> <p>Line 7 correct line <code>Num[Index] = Number</code></p> <p>Line 9 correct line <code>NEXT (Index)</code></p> <p>Line 10 correct line <code>PRINT Count</code></p>	4