12. In an archery game, players score points when they hit the target.

The points entered are whole numbers in the range 0 to 10.

The game has 10 rounds and each player shoots two arrows in each round.

The program below is written to record a player's score.

```
...
Line 24 SET totalScore TO 0.00
Line 25 SEND "round1" TO DISPLAY
Line 26 RECEIVE arrow1 FROM (REAL) KEYBOARD
Line 27 RECEIVE arrow2 FROM (REAL) KEYBOARD
Line 28 SET roundTotal1 TO arrow1 + arrow2
Line 29 SET totalScore TO totalScore + roundTotal1
...
Line 70 SEND "round10" TO DISPLAY
Line 71 RECEIVE arrow19 FROM (REAL) KEYBOARD
Line 72 RECEIVE arrow20 FROM (REAL) KEYBOARD
Line 73 SET roundTotal10 TO arrow19 + arrow20
Line 74 SET totalScore TO totalScore + roundTotal10
Line 75 < display all ten round totals >
Line 76 SEND "TotalScore: " & totalScore TO DISPLAY
```

(a) When this code is evaluated it is found to be inefficient.

Explain how to make this code more efficient. **3**

(b) A tester enquired why the total score was displayed as below:

Total score: 180.60

Explain the problem with the program that this output has highlighted. **1**

12. (continued)

(c) The code below is written to store the names of a maximum of 40 competitors in an archery competition.

```
...
Line 80   SET stop TO TRUE
Line 81   SET count TO 0
Line 82   WHILE NOT(stop) AND count <= 40 DO
Line 83      RECEIVE nextPerson FROM (STRING) KEYBOARD
Line 84      IF nextPerson = "NO" THEN
Line 85           SET stop TO FALSE
Line 86      ELSE
Line 87           <store name entered>
Line 88           SET count TO count + 1
Line 89      END IF
Line 90   END WHILE
Line 91   SEND "Total archers " & count TO DISPLAY
...
```

Describe why this code will not function as expected. **1**

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