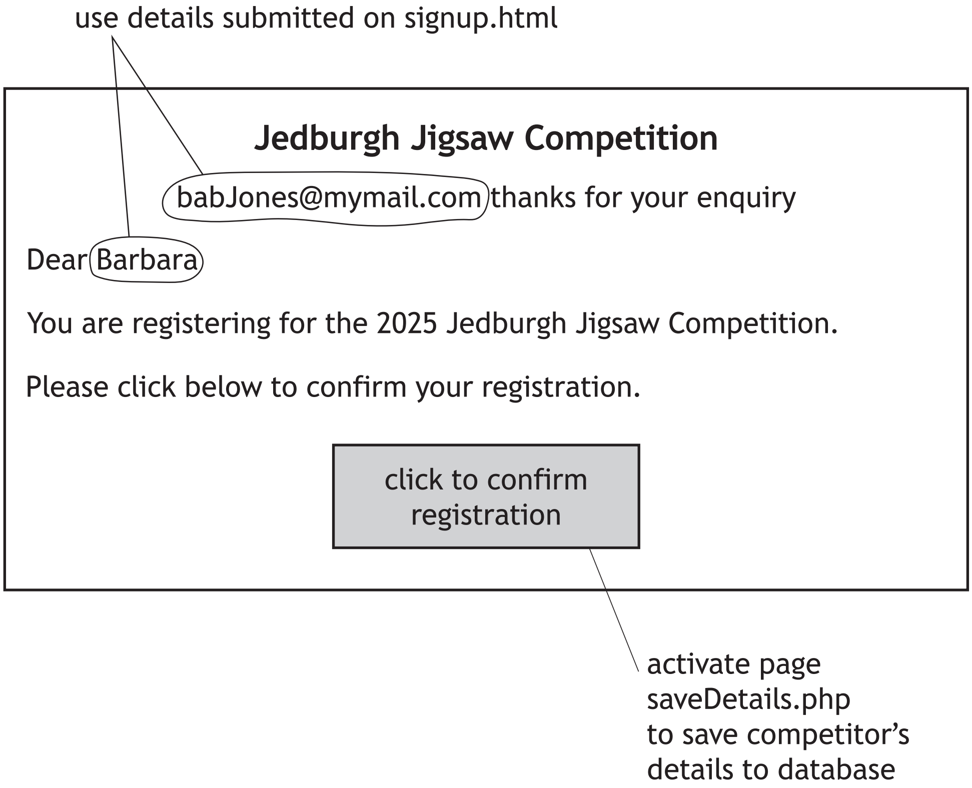
10. The Jedburgh Jigsaw Competition is held each year. Jigsaw enthusiasts can register to take part in the competition and view the results on the competition website.

Data about each competitor is stored in an online database in a table called `Competitor`. The structure of the `Competitor` table is shown below:

Competitor
competitorID
forename
surname
email
timeTakenRound1
timeTakenRound2
competitorPoints

(a) Competitors register using a sign-up form on the page `signup.html`. The form data is then submitted to the PHP page `confirmation.php`.

(i) The layout produced by the page `confirmation.php` is shown in the wireframe design below.



Jedburgh Jigsaw Competition

babJones@mymail.com thanks for your enquiry

Dear Barbara

You are registering for the 2025 Jedburgh Jigsaw Competition.

Please click below to confirm your registration.

use details submitted on signup.html
click to confirm registration
activate page saveDetails.php to save competitor's details to database

Explain how sessions and session variables would be used in this situation. **3**

10. (a) (continued)

(ii) Before the form data can be processed, the website must first connect to the database server.

Write the PHP code needed to connect to the database and assign the connection to the variable `$link`. Your code should make appropriate use of the following connection details:

```
database: jigsawFixture

password: pass1234

server: jigsaw1

user: admin
```

2

[Turn over

10. (continued) **MARKS**

(b) The competition consists of two rounds. In each round, the time taken to complete the jigsaw is recorded. At the end of each round, points are awarded to the competitors who completed the jigsaw in the fastest times as follows:

- The competitor with the best time receives 8 points.
- The competitor with the next best time receives 5 points.
- The competitor with the third best time receives 3 points.
- The competitors with the next 21 best times receive 1 point.
- The remaining competitors do not receive any points.

It can be assumed that all times are unique.

The section of the code used to process the results of Round 1 is shown below.

```
…
Line 37   $query = "SELECT competitorID, forename, surname,
          timeTakenRound1 FROM Competitor ORDER BY
          timeTakenRound1 ASC";
Line 38   $round1 = mysqli_query($link, $query);
Line 39   echo "<p>Scores for Round 1</p>";
Line 40   echo "<table>";
Line 41   //display headings of HTML table for Round 1 results
Line 42   …
Line 43   //initialise $numProcessed to count number of
          competitors processed
Line 44   $numProcessed = 0;
Line 45   //initialise points allocated to a competitor
Line 46   $points = 0;
Line 47   //process round 1 results of an individual
          competitor
Line 48   while (($row = mysqli_fetch_array($round1)) and
          $numProcessed < 24)
Line 49   {
Line 50      //allocate points to an individual competitor
…
Line 62      //display individual competitor details in table
Line 63      __________________
Line 64      //execute query to store the competitor's points
             in the database
Line 65      __________________
Line 66      $numProcessed = $numProcessed + 1;
Line 67   }
Line 68   echo "</table>";
```

(i) Explain the significance of the SQL query at line 37. **1**

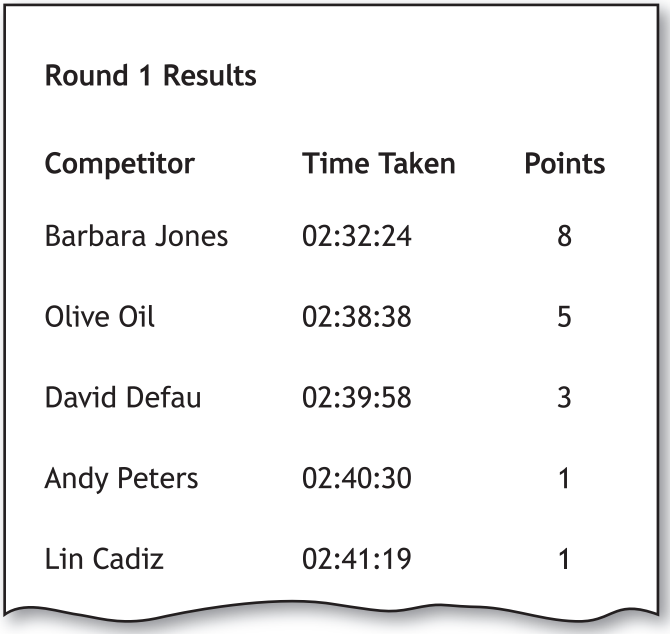
(ii) Explain how the complex condition at line 48 is used to control the `while` loop. **2**

10. (b) (continued)

(iii) Within the `while` loop, the points allocated to the competitors with the best times are used to update the variable `$points`.

Using pseudocode, design the section of code used to allocate points to the competitors. **2**

(iv) The screen shot below shows the output produced by the HTML table used to display the Round 1 Results.



Round 1 Results

Competitor	**Time Taken**	**Points**
Barbara Jones	02:32:24	8
Olive Oil	02:38:38	5
David Defau	02:39:58	3
Andy Peters	02:40:30	1
Lin Cadiz	02:41:19	1

Write the PHP code needed at line 63 to display the details of a single competitor in one row of the HTML table. **2**

(v) Once the points for an individual competitor have been allocated and displayed, a query is used to store the points in the database.

The incomplete code used at line 65 is shown below.

```
mysqli_query($link, "_______________________________
WHERE competitorID = '$row[competitorID]'");
```

Write the statement needed to complete this query. **1**