
Sample Assignment: Unit 10 Numerical Modelling using Spreadsheets

ASSIGNMENT 1 – THE SPORTS DAY PROBLEM

This assignment will allow you to meet all of the assessment requirements for Unit 10: *Numerical Modelling Using Spreadsheets*. You should look at the Assessment Evidence Grid to check what you need to demonstrate in each task to achieve each mark band.

The Problem

St Catherine's School wants to use a spreadsheet solution to record the results of its sports day. The times and distances achieved by each athlete will be recorded, along with which of three teams the athletes belong to.

Core Requirements

On-screen and printed results sheets recording all the events, names of competing athletes, and times and distances achieved. A final list of which team has scored most points based on an events scoring system. A list of the most successful athletes by year group and gender.

Input Data

- Names, year groups, genders and teams of athletes
- Events (track and field) for each year group
- Current school record for each event
- Performances for each competing athlete for every event.

Processing and Modelling

- Points scoring system for each event and new school records
- Addition of points to find leading team
- Addition of points to find most successful athletes.

Outputs

- Current positions of teams, and finally the winning team
- Points scored by each team
- Points scored by leading athletes.

Possible Facilities and User Aids

- Different sheets for different year groups
- Validation of performances (times and distances)
- Comment boxes to explain how to use data entry facilities
- Macros to initiate sorting of overall table and printing of results sheet(s)
- Conditional formatting to identify school records.

Extensions to the Solution - Adding Extra Functions

- Database of all competing athletes
- Lookup facilities to find athletes
- More year groups
- More events
- Most successful athletes.

Extensions to the Solution - Making the Modelling More Sophisticated

- Different points scoring systems for events
- Facility to predict likely final result based on performances to date.