Program Design, Pseudocode and Algorithm Defining

1.

Defining the problem:

collecting scores, calculating average score and outputting results

Control structures required:

Repetition and sequence

Pseudo coding the problem:

* 1. declare a variable that holds sum of the number of scores
  2. while n is less that the length of the array of scores,
  3. loop through array of scores and add each element to sumOfN to result the total of scores.
  4. divide the total scores by the number of scores to get average
  5. display result

Variables required:

scores and number of scores

Checking solution with test data:

scores = [5,5,3,2,5]

length of score =

sum of scores = 20

average score = 20/5

result = 4

2.

Pseudocode:

1. declare variables to hold the dimensions of the roof
2. declare a variable to hold inches of rainfall
3. if dimensions of roof are measured in inches move to step 4
4. else if, convert each dimension into inches
5. multiply the roof dimensions by the number of inches of rainfall to get cubic inches
6. divide the result by 231 to get final result
7. display result