1. Find the average score

A program is needed to prompt the user operator for ten exam scores, calculate the

average score and display the result to the screen. The average score is calculated

as the sum of the scores divided by the number of scores.

|  |  |  |
| --- | --- | --- |
| Input | Processing | Output |
| Exam\_number  Exam\_score  Exam\_sum  Average | Receive exam\_number  Receive exam\_score  Receive exam\_sum  Receive average  Divide exam\_sum by exam\_number | Print Average |

Pseudocode:

Set exam\_number to zero

DOWHILE exam\_number < 11

Prompt user for exam\_score

Update exam\_sum

Add 1 to exam\_number

ENDDO

Average = exam\_sum / exam\_number

Print Average

2. How much water runs off the roof

How much water runs off a roof in a rain storm?

To calculate the runoff from any given rainfall: Take the dimensions of the

footprint of the roof and convert them to inches.

(So, a 50' x 20' roof is 600" x 240").

Multiply the roof dimensions by the number of inches of rainfall.

In this example, 600" x 240" x 1" = 144,000 cubic inches of water.

Divide that result by 231 to get the number of gallons

(because 1 gallon = 231 cubic inches). (144,000/231 = 623.38).

Write the pseudocode for the above problem. If you use the numbers provided in the

example then the correct pseudocode will calculate the same result.

|  |  |  |
| --- | --- | --- |
| Input | Processing | Output |
| Inches\_rainfall  Roof\_width  Roof\_length | Receive inches\_rainfall  Receive roof\_width  Receive roof\_length  Multiply roof\_width by 12 to get roof\_in\_width  Multiply roof\_length by 12 to get roof\_in\_length  Multiply roof\_in\_width x roof\_in\_length x inches\_rainfall to get cub\_inches  Divide cub\_inches by 231 to get gallons\_rainfall | Print gallons\_rainfall |

Pseudocode:

Prompt user for inches\_rainfall

Prompt user for roof\_width

Prompt user for roof\_length

Roof\_in\_width = roof\_width x 12

Roof\_in\_length = roof\_length x 12

Cub\_inches = roof\_in\_width x roof\_in\_length x inches\_rainfall

Gallons\_rainfall = cub\_inches / 231

Print gallons\_rainfall