**What is pseudocode?**

* Uses structured, English-like language to describe the steps in an algorithm.
* Allows a programmer to focus on describing the logic of the algorithm without being distracted by details of the programming language's syntax.
* Each instruction on a line by itself.
* Instructions performed in the sequence (top to bottom) that they are written.
* There is no universal "standard" for writing pseudocode, and each programmer has his/her own style.
* Some keywords used in pseudocode indicate common input, processing, and output operations:
  + Input: Read, Get, Obtain
  + Processing: Set, Compute, Calculate, Determine
  + Output: Print, Display, Show

Example pseudocode describing an algorithm to calculate whether a student passed a course.

start

get mark from student

if mark < 0 or mark > 100

output “Error in input”

else

if mark < 50

output “Sorry, you did not pass”

else

output “Congrats you passed!”

stop

In this activity sheet you will be asked to examine pseudocode and write pseudocode to address familiar problems.

1. Coffee R Us hired someone to create pseudocode that calculates a worker’s paycheck based on how many hours they worked and what the hourly rate is. **The pseudocode is above, but it has four errors – highlight the errors and indicate how can you fix them.**

start

get hours from employee

calculate paycheck = hoursworked + rate\_of\_pay

get rate\_of\_pay

output pay

stop

I could fix the errors by;

1. Change “hours” to “hours worked”
2. Multiply hours worked by rate of pay. (not add)
3. Get rate of pay before calculating paycheck.
4. Pay should paycheck.

Figure 1 Answer box for Q1

1. We want to write a program that calculates the *square* of any number. Answer the questions below.
   1. What input do we need to get?

|  |
| --- |
| A number from the user |

* 1. Show how we use multiplication to calculate the square of a number.

Number \* Number

* 1. Finish the overall algorithm by adding three lines of pseudocode instruction between start and end.

start

get number from user

calculate square = number \* number

output result

end

1. Write pseudocode that obtains two numbers, then divides the first number by the second and then prints the result as output. Remember that the order of instructions is important!

start

get number1

get number2

divide numbers = number1 / number2

output result

end