**Exercice 1**: Write pseudo code that reads two numbers and multiplies them together and print out their product.

**FUNCTION [Quotient of 2 numbers]**

BEGIN

DECLARE 3 VARIABLES: firstNumber AS NUMBER AND secondNumber AS NUMBER

quotient AS Number

READ firstNumber AND secondNumber

quotient = firstNumber \* secondNumber

OUTPUT quotient

END END FUNCTION

**Exercice 2**: Write pseudo code that tells a user that the number they entered is not a 5 or a 6.

**FUNCTION [Is\_Not\_5\_Is\_Not\_6]**

BEGIN

DECLARE VARIABLE num AS NUMBER

READ num

IF(num NOT 5) THEN:

OUTPUT(“The entered number is not a 5”)

END IF

IF(num not 6) THEN:

OUTPUT(“The entered number is not 6”)

END IF

OUTPUT(num)

END FUNCTION

**Exercice 3**: Write pseudo code that performs the following: Ask a user to enter a number. If the number is between 0 and 10, write the word blue. If the number is between 10 and 20, write the word red. if the number is between 20 and 30, write the word green. If it is any other number, write that it is not a correct color option.

FUNCTION [Number\_To\_Color]

BEGIN

DECLARE VARIABLE num AS NUMBER

IF(num > 0 AND num < 10 ) THEN

OUTPUT(“blue”)

END IF

IF(num > 10 AND num < 20) THEN:

OUTPUT(“red”)

END IF

IF(num > 20 AND num < 30) THEN:

OUTPUT(“green”)

END IF

OUTPUT(“That’s not a correct color option”)

END FUNCTION

**Exercice 4**: Write pseudo code to print all multiples of 5 between 1 and 100 (including both 1 and 100).

FUNCTION [Multiple\_of\_5]

BEGIN

DECLARE VARIABLE counter AS NUMBER

INITIALIZE counter = 5

REPEAT UNTIL counter <= 100

IF(counter MOD 5 IS 0) THEN:

OUTPUT(counter)

count = count + 1

END IF

END LOOP

END FUNCTION

**Exercice 5**: Write pseudo code that will count all the even numbers up to a user defined stopping point.

**FUNCTION [Even\_Numbers]**

BEGIN

DECLARE VARIABLE num AS NUMBER, counter AS NUMBER

READ num

REPEAT UNTIL counter <= num

IF(num MOD 2 IS 0) THEN

counter = counter + 1

END IF

END LOOP

END FUNCTION

**Exercice 6**: Write pseudo code that will perform the following.

1. Read in 5 separate numbers.
2. Calculate the average of the five numbers.
3. Find the smallest (minimum) and largest (maximum) of the five entered numbers.
4. Write out the results found from steps b and c with a message describing what they are

FUNCTION [min\_max]

BEGIN

DECLARE VARIABLES a,b,c,d,e AS NUMBER,average AS NUMBER,min AS NUMBER,max AS NUMBER

INITIALIZE min = a,max = a

READ a,b,c,d,e

average = (a+b+c+d+e)/5

IF(min > b) THEN:

min = b

END IF

IF(min > c) THEN:

min = c

END IF

IF(min > d) THEN:

min = d

END IF

IF(min > e) THEN:

min = e

END IF

IF(max < b) THEN:

max = b

END IF

IF(max < c) THEN:

min = c

END IF

IF(max < d) THEN:

min = d

END IF

IF(max <e) THEN:

min = e

END IF

OUTPUT(min)

OUTPUT(“ is a minimum value”)

OUTPUT(max)

OUTPUT(“ is a maximum value”)

END FUNCTION

**Homework 1**: Write pseudo code that reads in three numbers and writes them all in sorted order.

**Solution** 1

**FUNCTION** [Three\_Sorted\_Numbers]

BEGIN

DECLARATION VARIABLESa,b,c AS NUMBER

READ a,b,c

IF(a<b<c) THEN:

OUTPUT(a,b,c)

END IF

ELSE IF(a<c<b) THEN:

OUTPUT(a,c,b)

END IF

ELSE IF(b<a<c) THEN:

OUTPUT(b,a,c)

END IF

ELSE IF(b<c<a) THEN:

OUTPUT(b,c,a)

END IF

ELSE IF(c<a<b) THEN:

OUTPUT(c,a,b)

END IF

ELSE IF(c<b<a) THEN:

OUTPUT(c,b,a)

END IF

END FUNCTION

**Solution 2**

**FUNCTION** [Three\_Sorted\_Numbers]

BEGIN

DECLARATION VARIABLESa,b,c AS NUMBER

READ a,b,c

IF(a>b) THEN:

swap(a,b)

END IF

IF(a>c) THEN:

swap(a,c)

END IF

IF(b>c) THEN:

swap(b,c)

END IF

OUTPUT(a,b,c)

END FUNCTION

**Homework 2**: Write pseudo code that will calculate a running sum. A user will enter numbers that will be added to the sum and when a negative number is encountered, stop adding numbers and write out the final result.

**FUNCTION [Running\_Sum]**

BEGIN

DECLARE VARIABLE num,sum AS NUMBER

INITIALIZE sum = 0

REPEAT UNTIL num < 0

READ num

sum = sum + num

END LOOP

OUTPUT(sum)

END FUNCTION