

# Bonus\_13

**Must write an algorithm that;**

- Takes two numbers as input
- Checks if number A is a multiple of number B
- Checks if number B is a multiple of number A

This should be placed in nested if statements because there are **TWO “IF ELSE”** questions that must be resolved before the program gives output;

1. If the first number is a multiple of the second.
2. If the second number is a multiple of the first.

*Below is an algorithm that solves this problem.*

```
PROGRAM IS_MULTIPLE
BEGIN

numberA <- 0
numberB <- 0

PRINT "Enter 1st integer: "
READ_INT numberA

PRINT "Enter 2nd integer: "
READ_INT numberB

IF (numberA MOD numberB == 0) THEN
    PRINT numberA, "is a multiple of", numberB
ELSE THEN
    IF (numberB MOD numberA == 0) THEN
        PRINT numberB, "is a multiple of", numberA
    ELSE THEN
        PRINT "No integer is a multiple of the other"
    ENDIF
ENDIF

END
```

```
numberA = int(input("Enter 1st integer: "))
numberB = int(input("Enter 2nd integer: "))

if numberA % numberB == 0:
    print(numberA, "is a multiple of", numberB)
elif numberB % numberA == 0:
    print(numberB, "is a multiple of", numberA)
else:
    print("No integer is a multiple of the other")
```

