**Exercise Sheet 1**

Write a program that works as an “adding machine”. It needs to ask the user to enter 2 numbers, then add these numbers together and print the answer to the screen. Write your program as a source file, not on the interactive shell.

**Exercise Sheet 2**

1. Improve your “adding machine” into a calculator. It needs to ask the user for 2 numbers, and then for an operator (either +, -, \* or /). It then needs to apply the operator to the numbers and print the answer – so if the user enters 2, 3 and \*, the answer 6 would be printed (2 \* 3).
2. You will notice that your calculator doesn't properly work for division (try entering 3/2!). Think about why this happens, and try to fix it. (Hint: ask your calculator to add together 1.5 and 1.6).
3. Write a program to print every number between 0 and 100 inclusive (note that inclusive means every number including the ones listed – so for this example, you need to print 0, 1, 2 all the way through to 98, 99, 100).
4. Write a program that prints every number between 20 and 25 inclusive AND 70 and 80 inclusive, but using only ONE loop. Don't print out any other numbers.
5. Write a program to print all numbers between 0 and 80 inclusive that are divisible by 4.
6. Change your last program so that it doesn't print any numbers that are between 10 and 25 inclusive, but prints every other number that part 5 does.

**Answers**

**Exercise Sheet 1**

num1 = raw\_input("Enter first number: ")

num2 = raw\_input("Enter second number: ")

result = num1 + num2

print num1, '+', num2, '=', result

ANSWER ABOVE IS WRONG! NEEDS TO USE TYPECASTING

num1 = int(raw\_input("Enter first number: "))

num2 = int(raw\_input("Enter second number: "))

result = num1 + num2

print num1, '+', num2, '=', result

**Exercise Sheet 2**

1)

num1 = int(raw\_input("Enter first number: "))

operator = raw\_input("Enter operator (e.g. +, -, \*, /): ")

num2 = int(raw\_input("Enter second number: "))

if operator == "+":

result = num1 + num2

print num1, '+', num2, '=', result

if operator == "-":

result = num1 - num2

print num1, '-', num2, '=', result

if operator == "\*":

result = num1 \* num2

print num1, '\*', num2, '=', result

if operator == "/":

result = num1 / num2

print num1, '/', num2, '=', result

2)

num1 = float(raw\_input("Enter first number: "))

operator = raw\_input("Enter operator (e.g. +, -, \*, /): ")

num2 = float(raw\_input("Enter second number: "))

if operator == "+":

result = num1 + num2

print num1, '+', num2, '=', result

if operator == "-":

result = num1 - num2

print num1, '-', num2, '=', result

if operator == "\*":

result = num1 \* num2

print num1, '\*', num2, '=', result

if operator == "/":

result = num1 / num2

print num1, '/', num2, '=', result

3)

for i in xrange(0,101):

print i

4)

for i in xrange(0,100):

if i >= 20 and i <= 25:

print i

if i >= 70 and i <= 80:

print I

5)

for i in xrange(0, 81):

if i % 4 == 0:

print I

6)

for i in xrange(0, 81):

if i % 4 == 0:

if i < 10 or i > 25:

print i