Name: Class: Mark:

1. An algorithm is given below.

1. DECLARE Number1 : FLOAT
2. DECLARE Number2 : FLOAT
3. DECLARE Number3 : FLOAT
4. Number1 🡨 RANDOM()
5. Number2 🡨 Number1 \* 6
6. Number3 🡨 ROUND(Number2, 0)
7. OUTPUT Number3

(a) State the possible range of numbers that Number1 will store. [2]

(b) State the possible range of numbers that Number2 will store. [2]

(c) Explain the difference between Number2 and Number3 [2]

(d) Explain the problem with using this algorithm to determine a dice roll of a six sided dice. [2]

2. The table below shows a number of uses of the ROUND() library routine.

 Complete the table by showing for each one what is returned by the routine
or the output of the program. [4]

|  |  |
| --- | --- |
| **Use of ROUND()** | **What is returned from ROUND() or what is the output of the program** |
| ROUND(73.28379,2) |  |
| ROUND(3.8492,2) |  |
| Number 🡨 21Number 🡨 Number + 0.12345OUTPUT ROUND(Number, 0) |  |
| Number 🡨 23.3Number 🡨 Number \* 0.1OUTPUT ROUND(Number, 1) |  |

3. The following table shows some further Python library routines in use.

 State the **three** outputs from the program. [3]

import statistics

heights = [147,162,166,165]

a = max(heights)

b = statistics.mean(heights)

animals = ['Zebra', 'Cat', 'Giraffe', 'Camel']

animals.sort()

print(a)

print(b)

print(animals)

 [Total 15 marks]