Name: Class:

Task 1

1. The table below shows a set of examples using the ROUND library subroutine. Complete the table to show the result or output from the routine.

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| **ROUND examples** | **Result of the routine or output from the program** |
| ROUND(321.903, 1) |  |
| ROUND(17.298, 2) |  |
| DECLARE Distance : REAL Distance 🡨 5.9283 OUTPUT ROUND(Distance,3) |  |
| CONSTANT Pi 🡨 3.141592653 PiShort 🡨 ROUND(Pi, 3) OUTPUT PiShort |  |

2. Write an algorithm that takes two FLOATS from the user, adds them together, then outputs the result to four decimal places.

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Task 2

1. The table below shows a set of library routines using RANDOM and ROUND. Complete the table to show the result or output from the routine.

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| **Library routine** | **Result of the routine or output from the program** |
| RANDOM() |  |
| RANDOM()+5 |  |
| IF RANDOM() > 0.5  THEN  OUTPUT "Heads"  ELSE  OUTPUT "Tails" |  |
| ROUND(RANDOM()\*100 + 0.5, 0) |  |

2. Write an algorithm that outputs a random number between 1.0 and 10.0 given to one decimal place.

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**Task 3**

1. The following table shows a number of library routines available in Python. Complete the table to show the purpose of each one.

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| **Library routine** | **Purpose of the library routine** |
| min(array) |  |
| max(array) |  |
| sum(array) |  |
| import statistics statistics.mean(array) |  |
| array.sort() |  |

2. Write a program that makes use of the following two arrays:

examResults = [63, 92, 84, 57, 72, 94, 63]  
candidates = ["Diya", "Ali", "Charles", "Eric", "Hanna", "Gabriel", "Delores"]

* Find and output the highest exam result
* Find and output the lowest exam result
* Find and output the average (mean) exam result
* Output the names of the candidates in alphabetical order with the following formatting:

Candidate 1: Ali  
Candidate 2: Charles  
Candidate 3: Delores…

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