# Lab 1: Sample Solution

## Defining Diagram

|  |  |  |
| --- | --- | --- |
| **Input** | **Processing** | **Output** |
| numCredits | Prompt for numCredits  Read numCredits  Calculate total tuition cost  Print total tuition cost | totalTuitionCost |

## Solution Algorithm

CALCULATE\_TOTAL\_TUITION\_COST  
1 PROMPT user for numCredits  
2 READ numCredits

3 SET costPerCredit = 200

4 SET technologyFeePerCredit = 5

5 SET registrationFee = 100  
6 SET totalTuitionCost = registrationFee +

((costPerCredit + technologyFeePerCredit) \* numCredits)

7 PRINT ‘The total tuition cost is ‘, totalTuitionCost  
END

## Desk Checking Table Method Input Test Data

|  |  |  |
| --- | --- | --- |
|  | **First data set** | **Second data set** |
| numCredits | 12 | 16 |

### Expected Result

|  |  |  |
| --- | --- | --- |
|  | **First data set** | **Second data set** |
| totalTuitionCost | $2560.00 | $3380.00 |

### Desk Checking Table

|  |  |  |
| --- | --- | --- |
| **Statement Number** | **numCredits** | **totalTuitionCost** |
| **First pass** |  |  |
| 1,2 | 12 |  |
| 6 |  | 2560.00 |
| 7 |  | Print |
| **Second pass** |  |  |
| 1,2 | 16 |  |
| 6 |  | 3380.00 |
| 7 |  | Print |