# Module 2a: Practice Problem Solution

## Defining Diagram

|  |  |  |
| --- | --- | --- |
| **Input** | **Processing** | **Output** |
| grade1  grade2  grade3  grade4 | Read four grades  Calculate average exam grade  Print final grade | final\_grade |

## Solution Algorithm

CALCULATE\_FINAL\_GRADE  
1 Prompt user for grade1, grade2, grade3, grade4  
2 Read grade1, grade2, grade3, grade4  
3 Set final\_grade = (grade1 + grade2 + grade3 + grade4) / 4  
4 Print final\_grade  
END

## Desk Checking Table Method Input Test Data

|  |  |  |
| --- | --- | --- |
|  | **First data set** | **Second data set** |
| grade1 | 100 | 50 |
| grade2 | 100 | 60 |
| grade3 | 90 | 70 |
| grade4 | 70 | 100 |

### Expected Result

|  |  |  |
| --- | --- | --- |
|  | **First data set** | **Second data set** |
| final\_grade | 90 | 70 |

### Desk Checking Table

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Statement Number** | **grade1** | **grade2** | **grade3** | **grade4** | **average** |
| **First pass** |  |  |  |  |  |
| 1,2 | 100 | 100 | 90 | 70 |  |
| 3 |  |  |  |  | 90 |
| 4 |  |  |  |  | print |
| **Second pass** |  |  |  |  |  |
| 1,2 | 50 | 60 | 70 | 100 |  |
| 3 |  |  |  |  | 70 |
| 4 |  |  |  |  | print |