**PSP2 Project Plan Summary**

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| --- | --- | --- | --- |
| Student | Erica Prado Castañeda | Date | 21/02/2015 |
| Program | Conceptos Avanzados de Ingenieria | Program # | PSP2 |
| Instructor |  | Language | Java |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Summary** | **Plan** | | |  | | | **Actual** | | | |  | | **To Date** | | | |
| Size/Hour | 0.23 | | |  | | | 0.20 | | | |  | | 1 | | | |
| Planned Time | 300 | | |  | | |  | | | |  | | 935 | | | |
| Actual Time |  | | |  | | | 355 | | | |  | | 1022 | | | |
| CPI (Cost-Performance Index) |  | | |  | | |  | | | |  | | 0.91 | | | |
|  |  | | |  | | |  | | | |  | | (Planned/Actual) | | | |
| % Reuse | 0 | | |  | | | 0 | | | |  | | 16.2% | | | |
| % New Reusable | 0 | | |  | | | 0 | | | |  | | 0 | | | |
| ***Test Defects/KLOC or equivalent*** | 0 | | |  | | | 0.3 | | | |  | | 0.3 | | | |
| ***Total Defects/KLOC or equivalent*** | 0 | | |  | | | 1.8 | | | |  | | 1.8 | | | |
| ***Yield %*** | 0 | | |  | | | 1.86% | | | |  | | 1.86% | | | |
|  |  | | |  | | |  | | | |  | |  | | | |
| **Program Size** | **Plan** | | |  | | | **Actual** | | | |  | | **To Date** | | | |
| Base (B) | 0 | | |  | | | 0 | | | |  | |  | | | |
|  | (Measured) | | |  | | | (Measured) | | | |  | |  | | | |
| Deleted (D) | 0 | | |  | | | 0 | | | |  | |  | | | |
|  | (Estimated) | | |  | | | (Counted) | | | |  | |  | | | |
| Modified (M) | 0 | | |  | | | 0 | | | |  | |  | | | |
|  | (Estimated) | | |  | | | (Counted) | | | |  | |  | | | |
| Added (A) | 70 | | | |  | 72 | | | |  | |  | | | |
|  | (A+M − M) | | | |  | (T − B + D − R) | | | |  | |  | | | |
| Reused (R) | 0 | | | |  | 0 | | | |  | | 24 | | | |
|  | (Estimated) | | | |  | (Counted) | | | |  | |  | | | |
| Added and Modified (A+M) | 70 | | | |  | 72 | | | |  | | 590 | | | |
|  | (Projected) | | | |  | (A + M) | | | |  | |  | | | |
| Total Size (T) | 70 | | | |  | 72 | | | |  | | 590 | | | |
|  | (A+M + B − M − D + R) | | | |  | (Measured) | | | |  | |  | | | |
| Total New Reusable | 0 | | | |  | 0 | | | |  | | 18 | | | |
|  |  | | | |  |  | | | |  | |  | | | |
| Estimated Proxy Size (E) | 70 | | | |  | 72 | | | |  | |  | | | |
|  |  | | | |  |  | | | |  | |  | | | |
| **Time in Phase (min.)** | **Plan** |  | **Actual** | | | | |  | **To Date** | | | | |  | **To Date %** |
| Planning | 15 |  | 20 | | | | |  | 81 | | | | |  | 5.3 |
| Design | 20 |  | 15 | | | | |  | 77 | | | | |  | 5.1 |
| ***Design Review*** | 20 |  | 30 | | | | |  | 30 | | | | |  | 1.9 |
| Code | 90 |  | 115 | | | | |  | 618 | | | | |  | 41 |
| ***Code Review*** | 20 |  | 35 | | | | |  | 35 | | | | |  | 2.31 |
| Compile | 0 |  | 0 | | | | |  | 103 | | | | |  | 6.8 |
| Test | 15 |  | 10 | | | | |  | 102 | | | | |  | 6.7 |
| Postmortem | 120 |  | 130 | | | | |  | 463 | | | | |  | 30.6 |
| Total | 300 |  | 355 | | | | |  | 1509 | | | | |  | 100 |

**(continued)**

**PSP2 Project Plan Summary (continued)**

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| Student | Erica Prado Castañeda | Program # | PSP2 |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Defects Injected** | ***Plan*** |  | **Actual** | | |  | **To Date** | | |  | **To Date %** |
| Planning |  |  | 0 | | |  | 0 | | |  | 0 |
| Design |  |  | 0 | | |  | 0 | | |  | 0 |
| ***Design Review*** |  |  | 0 | | |  | 0 | | |  | 0 |
| Code |  |  | 1 | | |  | 4 | | |  | 36.36 |
| ***Code Review*** |  |  | 0 | | |  | 0 | | |  | 0 |
| Compile |  |  | 0 | | |  | 3 | | |  | 27.27 |
| Test |  |  | 2 | | |  | 4 | | |  | 36.36 |
| Total Development |  |  | 3 | | |  | 11 | | |  | 100 |
|  |  |  |  | | |  |  | | |  |  |
| **Defects Removed** | ***Plan*** |  | **Actual** | | |  | **To Date** | | |  | **To Date %** |
| Planning |  |  | 0 | | |  | 0 | | |  | 0 |
| Design |  |  | 0 | | |  | 0 | | |  | 0 |
| ***Design Review*** |  |  | 0 | | |  | 0 | | |  | 0 |
| Code |  |  | 3 | | |  | 7 | | |  | 63.63 |
| ***Code Review*** |  |  | 0 | | |  | 0 | | |  | 0 |
| Compile |  |  | 0 | | |  | 2 | | |  | 18.18 |
| Test |  |  | 0 | | |  | 2 | | |  | 18.18 |
| Total Development |  |  | 3 | | |  | 11 | | |  | 100 |
| After Development |  |  | 0 | | |  |  | | |  |  |
|  |  | | |  |  | | |  |  | | |
| ***Defect Removal Efficiency*** | ***Plan*** | | |  | ***Actual*** | | |  | ***To Date*** | | |
| ***Defects/Hour − Design Review*** |  | | |  | 0 | | |  | 0 | | |
| ***Defects/Hour − Code Review*** |  | | |  | 1 | | |  | 1 | | |
| ***Defects/Hour − Compile*** |  | | |  | 0 | | |  | 0 | | |
| ***Defects/Hour − Test*** |  | | |  | 2 | | |  | 2 | | |
| ***DRL (DLDR/UT)*** |  | | |  |  | | |  |  | | |
| ***DRL (Code Review/UT)*** |  | | |  |  | | |  |  | | |
| ***DRL (Compile/UT)*** |  | | |  |  | | |  |  | | |

Test Report Template

|  |  |  |  |
| --- | --- | --- | --- |
| Student | Erica Prado Castañeda | Date | 12/02/2015 |
| Program | Conceptos Avanzados de Ingeniería de SW | Program # | PSP1.1 |
| Instructor | Luis Daniel Benavides | Language | Java |

|  |  |
| --- | --- |
| Test Name/Number | **1. 0 to x= 1.1** |
| Test Objective | Integrar una función utilizando la regla de Simpson con los datos anteriores |
|  |  |
| Test Description | Se debe realizar el cálculo de la función f(x) y ejecutar la formula completa |
|  | para obtener el valor de p |
|  |  |
|  |  |
|  |  |
| Test Conditions | Se debe calcular teniendo en cuenta que x = 1.1 y dof = 9 |
|  |  |
|  |  |
|  |  |
|  |  |
| Expected Results | El resultado esperado es: 0.35006 |
|  |  |
|  |  |
|  |  |
| Actual Results | El resultado obtenido: 0.35006 |
|  |  |
|  |  |
|  |  |
|  |  |
| Test Name/Number | **2. 0 to x= 1.1812** |
| Test Objective | Integrar una función utilizando la regla de Simpson con los datos anteriores |
|  |  |
| Test Description | Se debe realizar el cálculo de la función f(x) y ejecutar la formula completa |
|  | para obtener el valor de p |
|  |  |
|  |  |
|  |  |
| Test Conditions | Se debe calcular teniendo en cuenta que x = 1.1812 y dof = 10 |
|  |  |
|  |  |
|  |  |
|  |  |
| Expected Results | El resultado esperado es: 0.36757 |
|  |  |
|  |  |
|  |  |
| Actual Results | El resultado obtenido: 0.36757 |
|  |  |
|  |  |
|  |  |
|  |  |
| Test Name/Number | **2. to x= 2.750** |
| Test Objective | Integrar una función utilizando la regla de Simpson con los datos anteriores |
|  |  |
| Test Description | Se debe realizar el cálculo de la función f(x) y ejecutar la formula completa |
|  | para obtener el valor de p |
|  |  |
|  |  |
|  |  |
| Test Conditions | Se debe calcular teniendo en cuenta que x = 2.750 y dof = 30 |
|  |  |
|  |  |
|  |  |
|  |  |
| Expected Results | El resultado esperado es: 0.49500 |
|  |  |
|  |  |
|  |  |
| Actual Results | El resultado obtenido: 0.49500 |
|  |  |
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PSP Process Improvement Proposal (PIP)

|  |  |  |  |
| --- | --- | --- | --- |
| Student | Erica Prado Castañeda | Date | 21/02/2015 |
| Program | Conceptos Avanzados de Ingeniería de Software | Program # | PSP2 |
| Instructor | Luis Daniel Benavides | Language | Java |

|  |
| --- |
| Problem Description |
| Briefly describe the problems that you encountered. |
| En este ejercicio el principal problema que se enfrento fue la implementación de la fórmula ya que se |
| omitían pequeños detalles que alteraban el resultado esperado |
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|  |
| Proposal Description |
| Briefly describe the process improvements that you propose. |
| Para evitar este tipo de errores es necesario detallar a fondo el diseño para el cálculo de estas fórmulas y |
| además ser muy cuidadosos al momento del desarrollo |
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| Other Notes and Comments |
| Note any other comments or observations that describe your experiences or improvement ideas. |
| Con cada ejercicio mejora la estimación de tiempo y de líneas de código, se hace más asertiva |
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Size Estimating Template

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| --- | --- | --- | --- |
| Student | Erica Prado Castañeda | Date | 21/02/2015 |
| Program | Conceptos Avanzados de Ingeniería de Software | Program # | PSP2 |
| Instructor | Luis Daniel Benavides | Language | Java |
| Size Measure |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Estimated | | | | | | | | | | | |
| Base Parts |  | Base | |  | Deleted | |  | Modified | | |  | Added | |
|  |  | 0 | |  | 0 | |  | 0 | | |  | 0 | |
|  |  |  | |  |  | |  |  | | |  |  | |
|  |  |  | |  |  | |  |  | | |  |  | |
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| Total | B | | 0 | D | | 0 | M | | 0 | **BA** | | | 0 |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Actual | | | | | | | | | | |
| Base Parts |  | Base | |  | Deleted | |  | Modified | |  | Added | |
|  |  | 0 | |  | 0 | |  | 0 | |  | 0 | |
|  |  |  | |  |  | |  |  | |  |  | |
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| Total |  | | 0 |  | | 0 |  | | 0 |  | | 0 |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Estimated | | | | | | | |  | Actual | | |
| Parts Additions |  | Type |  | Items |  | Rel. Size | |  | Size\* |  | Size\* |  | Items |
| NumericalIntegration |  | Calc |  | 5 |  | L | |  | 48 |  | 37 |  | 5 |
| ConsoleController |  | Contro |  | 1 |  | S | |  | 8 |  | 8 |  | 1 |
| WebController |  | Contro |  | 2 |  | M | |  | 14 |  | 27 |  | 2 |
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| Total |  |  |  |  |  |  | PA | | 70 |  | 72 |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | |  | Estimated |  | Actual |
| Reused Parts | |  | Size |  | Size |
|  | |  | 0 |  | 0 |
|  | |  |  |  |  |
|  | |  |  |  |  |
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|  | |  |  |  |  |
|  | |  |  |  |  |
| Total | R | | 0 |  | 0 |

**(continued)**

Size Estimating Template (continued)

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| --- | --- | --- | --- |
| Student | Erica Prado Castañeda | Program | PSP1.1 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| PROBE Calculation Worksheet (Added and Modified) |  | Size |  | Time |
| Added size (A): A = BA+PA |  | 70 |  |  |
| Estimated Proxy Size (E): E = BA+PA+M |  | 70 |  |  |
| PROBE estimating basis used: (A, B, C, or D) |  | C |  | C |
| Correlation: (R2) |  | 0.38 |  | 0.27 |
| Regression Parameters: β0 Size and Time |  | 0 |  | 0 |
| Regression Parameters: β1 Size and Time |  | 1.02 |  | 1.18 |
| Projected Added and Modified Size (P): P = β0size + β1size\*E |  | 71.4 |  |  |
| Estimated Total Size (T): T = P + B - D - M + R |  | 71.4 |  |  |
| Estimated Total New Reusable (NR): sum of \* items |  | 0 |  |  |
| Estimated Total Development Time: Time = β0time + β1time\*E |  |  |  | 354 |
| Prediction Range: Range |  |  |  |  |
| Upper Prediction Interval: UPI = P + Range |  |  |  |  |
| Lower Prediction Interval: LPI = P - Range |  |  |  |  |
| Prediction Interval Percent: |  |  |  |  |

PSP Time Recording Log

|  |  |  |  |
| --- | --- | --- | --- |
| Student | Erica Prado Castañeda | Date | 21/02/2015 |
| Program | Conceptos Avanzados de Ingeniería de Software | Program # | PSP2 |
| Instructor | Luis Daniel Benavides | Language | Java |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Project** | **Phase** | **Start Date and Time** | **Int. Time** | **Stop Date and Time** | **Delta**  **Time** | **Comments** |
| PSP2 | Plan | 08:32 | 0 | 08:52 | 20 | - |
| PSP2 | Design | 09:05 | 0 | 09:20 | 15 | - |
| PSP2 | Code | 10:15 | 0 | 12:10 | 115 | - |
| PSP2 | Test | 12:10 | 0 | 12:20 | 10 | - |
| PSP2 | Post | 12:20 | 0 | 12:35 | 130 | - |
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PSP Defect Recording Log

|  |  |
| --- | --- |
| Defect Types |  |
| 10 Documentation | 60 Checking |
| 20 Syntax | 70 Data |
| 30 Build, Package | 80 Function |
| 40 Assignment | 90 System |
| 50 Interface | 100 Environment |

|  |  |  |  |
| --- | --- | --- | --- |
| Student | Erica Prado Castañeda | Date | 12/02/2015 |
| Program | Conceptos Avanzados de Ingeniería de Software | Program # | PSP1.1 |
| Instructor | Luis Daniel Benavides | Language | Java |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Project |  | | Date |  | Number |  | Type |  | Inject |  | Remove |  | Fix Time |  | Fix Ref. |
| PSP2 |  | | 21/02 |  | 1 |  | 80 |  | Code |  | Test |  | 1 |  |  |
| Description: | | | En el cálculo del factorial se debía tener en cuenta el cálculo desde el número anterior | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | |
| Project |  | | Date |  | Number |  | Type |  | Inject |  | Remove |  | Fix Time |  | Fix Ref. |
| PSP2 |  | | 21/02 |  | 2 |  | 80 |  | Test |  | Code |  | 12 |  |  |
| Description: | | | Error en cálculo del exponent negative en la function f(x) | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | |
| Project |  | | Date |  | Number |  | Type |  | Inject |  | Remove |  | Fix Time |  | Fix Ref. |
| PSP2 |  | | 21/02 |  | 3 |  | 80 |  | Test |  | Code |  | 5 |  |  |
| Description: | | | Error en impresión de resultados Web sin formato | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | |
| Project |  | | Date |  | Number |  | Type |  | Inject |  | Remove |  | Fix Time |  | Fix Ref. |
|  |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Description: | | |  | | | | | | | | | | | | | |
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| Project |  | | Date |  | Number |  | Type |  | Inject |  | Remove |  | Fix Time |  | Fix Ref. |
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| Description: | | |  | | | | | | | | | | | | | |
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| Project |  | | Date |  | Number |  | Type |  | Inject |  | Remove |  | Fix Time |  | Fix Ref. |
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| Description: | | |  | | | | | | | | | | | | | |
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| Project |  | | Date |  | Number |  | Type |  | Inject |  | Remove |  | Fix Time |  | Fix Ref. |
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| Description: | | |  | | | | | | | | | | | | | |
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| Project |  | | Date |  | Number |  | Type |  | Inject |  | Remove |  | Fix Time |  | Fix Ref. |
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| Description: | | |  | | | | | | | | | | | | | |
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**PSP2 Design Review Checklist**

|  |  |  |  |
| --- | --- | --- | --- |
| Student | Erica Estefanny Prado Castañeda | Date | 21/02/2015 |
| Program | Conceptos Avanzados de Ingenieria de Software | Program # | PSP2 |
| Instructor | Luis Daniel Benavides | Language | Java |

|  |  |
| --- | --- |
| Purpose | To guide you in conducting an effective design review |
| General | * Review the entire program for each checklist category; do not attempt to review for more than one category at a time! * As you complete each review step, check off that item in the box at the right. * Complete the checklist for one program or program unit before reviewing the next. |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | 1 | 2 | 3 |  |
| Completo | Verificar que el diseño cubra toda la funcionalidad del programa   * Que garantice todas las salidas deseadas * Que acepte todas las entradas necesarias | X | X | X |  |
| Reutilización de  Código | -Verificar que no haya redundancia de código a través de una óptima reutilización | X | X | X |  |
| Nombres | * Verificar que los nombres de variables sean descriptivos * Verificar que los nombres de clases sean descriptivos * Verificar que los nombres de métodos sean descriptivos | X | X | X |  |
| Orientation a Objetos | * Verificar dependencias con clases de otros paquetes * Interacción entre clases * Verificar abstracción y encapsulamiento | X | X | X |  |
| Visibilidad de Clases | * Visibilidad de clases * Visibilidad de variables * Visibilidad de métodos | X | X | X |  |
| Uso funcional | * Verificar que todas las funciones, procedimientos y métodos están propiamente usados * Verificar que todo este bien referenciado y definido | X | X | X |  |

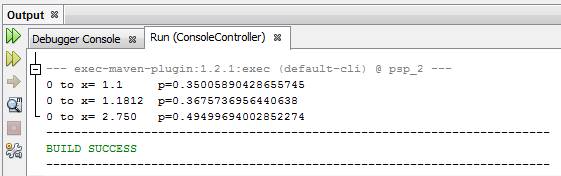
**Code Review Checklist**

|  |  |  |  |
| --- | --- | --- | --- |
| Student | Erica Estefanny Prado Castañeda | Date | 21/02/2015 |
| Program | Conceptos Avanzados de Ingenieria de Software | Program # | PSP2 |
| Instructor | Luis Daniel Benavides | Language | Java |

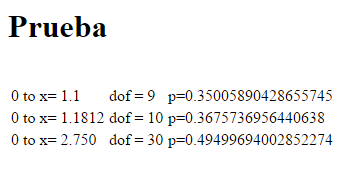
|  |  |
| --- | --- |
| Purpose | To guide you in conducting an effective code review |
| General | * Review the entire program for each checklist category; do not attempt to review for more than one category at a time! * As you complete each review step, check off that item in the box at the right. * Complete the checklist for one program or program unit before reviewing the next. |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | 1 | 2 | 3 |  |
| Completo | Verificar que el código cubra todo o diseñado | X | X | X |  |
| Includes | Verificar que no sobren includes en las clases | X | X | X |  |
| Inicialización | Verificar que las variables y parametros esten correctamente inicializados   * Al inicio del programa * Al inicio de cada ciclo * En la entrada de una clase, function o procedimiento | X | X | X |  |
| Nombres | Los nombres de clases, métodos y variables deben ser descriptivos | X | X | X |  |
| Operadores Lógicos | * Verificar el correcto uso de ==, =, ||, y demás operadores lógicos * Verificar cada ciclo – for, while | X | X | X |  |
| Revisión de Lineas | Verificar cada línea de código   * Verificar sintaxis * Verificar funcionalidad | X | X | X |  |
| Entandards | Asegurarse de que el código cumple con los estandares | X | X | X |  |
| Apertura y Cierre de archivos | Para el uso de archivos verificar:   * Correcta Declaración * Apertura * Cierre | X | X | X |  |
| Control de Excepciones | Validar que el código maneja control de excepciones a través de try-catch donde sea necesario | X | X | X |  |

**RESULTADOS PRUEBA POR CONSOLA**



**RESULTADOS PRUEBA WEB**



|  |  |  |  |
| --- | --- | --- | --- |
| **Test** | | **Expected Value** | **Actual Value** |
| ***x*** | ***dof*** | ***p*** |  |
| 0 to x= 1.1 | 9 | 0.35006 | 0.35006 |
| 0 to x= 1.1812 | 10 | 0.36757 | 0.36757 |
| 0 to x= 2.750 | 30 | 0.49500 | 0.49499 |