MC210203810: FATIMA FIRDOUS

Time Left 82 sec(s)

MTH603 - Numerical Analysis (Quiz No.3)

Quiz Start Time: 11:33 PM, 06 February 2022

Question # 6 of 10 ( Start time: 11:37:36 PM, 06 February 2022 )

Total Marks: 1

Given the following data x:4 5 7 10 y:46 102 294 346 Value of 1st order divided difference f[5 , 7] is



Select the correct option

Reload Math Equations

- 94
- 91
- 96
- 92

Click to Save Answer & Move to Next Question

MC210203810: FATIMA FIRDOUS

Time Left 86 sec(s)

MTH603 - Numerical Analysis (Quiz No.3)

Quiz Start Time: 11:33 PM, 06 February 2022

Question # 8 of 10 ( Start time: 11:39:07 PM, 06 February 2022 )

Total Marks: 1

*For the following data*

| $x$ | 1 | 2 | 5 | 7 | 8 |
|---|---|---|---|---|---|
| $y$ | −5 | 10 | 20 | 22 | 24 |

*the polynomial of the Lagrangens interpolation could be*

Select the correct option

Reload Math Equations

- $-\frac{11}{280}x^4+\frac{419}{420}x^3-\frac{7603}{840}x^2+\frac{15019}{420}x-\frac{98}{3}$
- $\frac{4}{41}x^7-\frac{43}{7}x^2+\frac{65}{28}x-\frac{186}{5}$
- $-\frac{1121}{80}x^5+\frac{41}{7}x^3-\frac{163}{40}x^2+\frac{19}{41}x-\frac{3}{10}$
- $x^6-\frac{1}{58}x^5+\frac{47}{2}x^4-\frac{67}{90}x+\frac{2}{3}$

Click to Save Answer & Move to Next Question

MC200203034: HADIA NAWAZ

Time Left 84 sec(s)

MTH603 - Numerical Analysis (Quiz No.3)

Quiz Start Time: 11:12 PM, 06 February 2022

Question # 9 of 10 ( Start time: 11:19:06 PM, 06 February 2022 )

Total Marks: 1

For the given data points $(x_0, y_0)$, $(x_1 y_1)$, $(x_2 y_2)$, and $(x_3, y_3)$ the first − order divide difference will be given as

Select the correct option

Reload Math Equations

- $y[x_0, x_1, x_2]$
- $y[x_0, x_1]$
- $y[y_0, y_1, y_2]$
- $y[x_0]$

Click to Save Answer & Move to Next Question

MTH603 - Numerical Analysis (Quiz No.3) Quiz Start Time: 11:1

Question # 5 of 10 ( Start time: 11:15:39 PM, 06 February 2022 )

$\Delta = - - - -$

Select the correct option

| | |
|---|---|
| ○ | None |
| ○ | $1 - E$ |
| ○ | $\frac{E-1}{2}$ |
| ○ | $E - 1$ |

Click to Save Answer & M

MC210203810: FATIMA FIRDOUS

Time Left 77 sec(s)

MTH603 - Numerical Analysis (Quiz No.3)

Quiz Start Time: 11:33 PM, 06 February 2022

Question # 1 of 10 ( Start time: 11:33:33 PM, 06 February 2022 )

Total Marks: 1

If $f(x) = 2x^3 - 5x^2 + 9x - 6$, then its------derivative is zero for all x.

Select the correct option

Reload Math Equations

- 2nd
- 3rd
- 4th
- 5th



Click to Save Answer & Move to Next Question

MC210203163: KAYNAT MAJEED

Time Left 88 sec(s)

MTH603 - Numerical Analysis (Quiz No.3)

Quiz Start Time: 08:58 PM, 06 February 2022

Question # 8 of 10 ( Start time: 09:09:13 PM, 06 February 2022 )

Total Marks: 1

Given the following data x:4 5 7 10 y:48 100 294 348 Value of 1st order divided difference f[5 , 7] is

Select the correct option

Reload Math Equations

- 92
- 94
- 96
- 91

Click to Save Answer & Move to Next Question

Quiz | IDM Integration Module

https://vulms.vu.edu.pk/Quiz/QuizQuestion.aspx?ver=6a100288-ec2d-49e4-8c6f-ace327425b14

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**Question # 8 of 10 ( Start time: 09:15:52 PM, 08 February 2022 )**

*For the following data*

| $x$ | 1 | 2 | 5 | 7 | 8 |
|---|---|---|---|---|---|
| $y$ | −5 | 10 | 20 | 22 | 24 |

*the polynomial of the Lagrangens interpolation could be*

**Select the correct option**

- $x^0 - \frac{1}{56}x^5 + \frac{47}{5}x^4 - \frac{67}{90}x + \frac{2}{5}$
- $-\frac{11}{280}x^4 + \frac{419}{420}x^3 - \frac{7603}{840}x^2 + \frac{15019}{420}x - \frac{98}{3}$
- $-\frac{1121}{80}x^5 + \frac{41}{7}x^3 - \frac{163}{40}x^2 + \frac{19}{81}x - \frac{3}{10}$
- $\frac{4}{41}x^7 - \frac{43}{7}x^2 + \frac{65}{28}x - \frac{180}{5}$

Click to

13°C Ligh

MC200405293: MUHAMMAD AMIR



Time Left 79 sec(s)

MTH603 - Numerical Analysis (Quiz No.3)

Quiz Start Time: 11:10 PM, 06 February 2022

Question # 6 of 10 ( Start time: 11:16:18 PM, 06 February 2022 )

Total Marks: 1

*For the given data points $(4, 2.2)$, $(8, 3.5)$, and $(12, 4.1)$ the divide difference table will be given as*

Select the correct option

Reload Math Equations

| $x$ | $y$ | $1stD.D$ | $2ndD.D$ |
|---|---|---|---|
| 4 | 2.2 | 0.325 | |
| 8 | 3.5 | 0.15 | $-0.0108$ |
| 12 | 4.1 | | |

| $x$ | $y$ | $1stD.D$ | $2ndD.D$ |
|---|---|---|---|
| 4 | 2.2 | 0.325 | |
| 8 | 3.5 | 0.15 | $-0.098$ |
| 12 | 4.1 | | |

| $x$ | $y$ | $1stD.D$ | $2ndD.D$ |
|---|---|---|---|
| 4 | 2.2 | 0.325 | |
| 8 | 3.5 | 0.15 | $-0.0219$ |
| 12 | 4.1 | | |

| $x$ | $y$ | $1stD.D$ | $2ndD.D$ |
|---|---|---|---|
| 4 | 2.2 | 0.325 | |
| 8 | 3.5 | 0.15 | $-0.065$ |
| 12 | 4.1 | | |

Click to Save Answer & Move to Next Question

MTH603 – Numerical Analysis (Quiz No.3) Quiz Start Time: 11:12 PM, 0

Question # 7 of 10 ( Start time: 11:17:18 PM, 06 February 2022 )

For the given data points $(2,5)$, $(4,7)$, and $(6,9)$, the first − order divide difference will be

Select the correct option

Reload M

- 0
- 5
- 2
- 1



Click to Save Answer & Move to N

MC210203815: ASMA NAEEM

Time Left 73 sec(s)

MTH603 - Numerical Analysis (Quiz No.3)

Quiz Start Time: 11:20 PM, 06 February 2022

Question # 7 of 10 ( Start time: 11:24:01 PM, 06 February 2022 )

Total Marks: 1

*What will be the value of 'a' in the given divide difference table?*

| $x$ | $y$ | $1stD.D$ | $2ndD.D$ |
|---|---|---|---|
| 3 | 0.4 | | |
| 6 | 0.9 | 0.1667 | |
| 9 | 1.7 | 0.2667 | $a$ |

Select the correct option

Reload Math Equations

- 0.0254
- 0.0167
- 0.028
- 0.0349



Click to Save Answer & Move to Next Question

Time Left 57 sec(s)

Quiz Start Time: 11:20 PM, 06 February 2022

Question # 9 of 10 ( Start time: 11:25:49 PM, 06 February 2022 ) Total Marks: 1

For the given data points $(4, 1.3)$, $(8, 1.5)$, and $(12, 1.9)$ the divide difference table will be given as

Select the correct option

Reload Math Equations

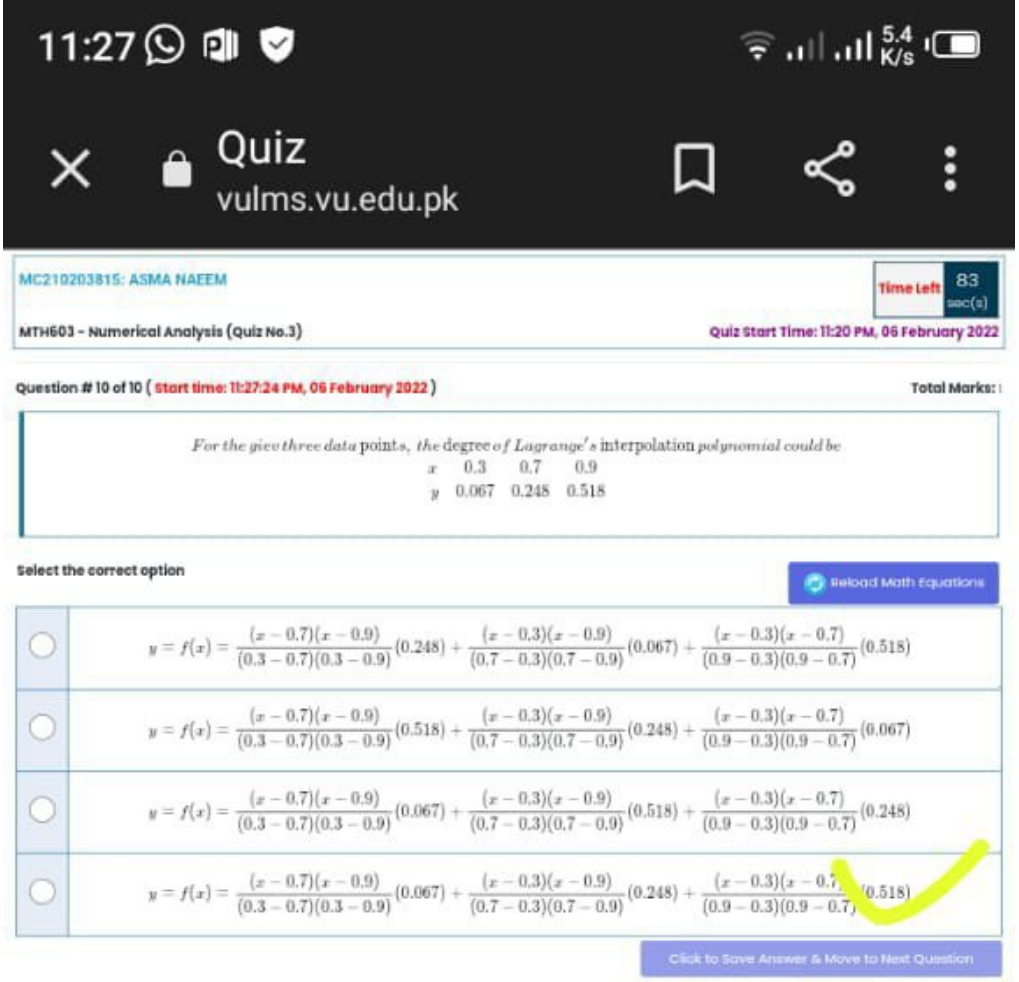
| $x$ | $y$ | $1st D.D$ | $2nd D.D$ |
|---|---|---|---|
| 4 | 1.3 | 0.0062 | |
| 8 | 1.5 | 0.1 | 0.05 |
| 12 | 1.9 | | |

| $x$ | $y$ | $1st D.D$ | $2nd D.D$ |
|---|---|---|---|
| 4 | 1.3 | 0.1 | |
| 8 | 1.5 | 0.35 | 0.0062 |
| 12 | 1.9 | | |

| $x$ | $y$ | $1st D.D$ | $2nd D.D$ |
|---|---|---|---|
| 4 | 1.3 | 0.1 | |
| 8 | 1.5 | 0.0062 | 0.05 |
| 12 | 1.9 | | |

| $x$ | $y$ | $1st D.D$ | $2nd D.D$ |
|---|---|---|---|
| 4 | 1.3 | 0.05 | |
| 8 | 1.5 | 0.1 | 0.0062 |
| 12 | 1.9 | | |

Click to Save Answer & Move to Next Question



MTH603 - Numerical Analysis (Quiz No.3) Quiz Start Time: 11:1

Question # 7 of 10 ( Start time: 11:19:20 PM, 06 February 2022 )

In Lagrange's interpolation, for the given five points we can represent the function f (x) by a polynomial of degree



Select the correct option

- 6
- 5
- 3
- 4

Click to Save Answer & Mo

rical Analysis (Quiz No.3) Quiz Start Time: 11:12 PM, 06 February

0 ( Start time: 11:19:59 PM, 06 February 2022 ) Total Mc

*r the given data points* $(x_0, y_0)$, $(x_1 y_1)$, $(x_2 y_2)$, *and* $(x_3, y_3)$ *the zero − order divide difference will be given as*



t option Reload Math Equatio

$y[y_0]$

$y[x_0]$

$y[x_0, x_1]$

$y[y_0, y_1]$

Click to Save Answer & Move to Next Questio

*Which of the following method can be used for* interpolation *for the given values of* $x$ *and* $y$*?*

| $x$ | 0.3 | 0.7 | 0.9 |
|---|---|---|---|
| $y$ | 0.067 | 0.248 | 0.518 |



- Newton's backward difference formula
- Newton's forward difference formula
- Lagrange's interpolation formula
- Newton's interpolation formula

BC180403728: AROOBA KHAN

MTH603 - Numerical Analysis (Quiz No.3) Quiz Start Time: 10:

Question # 9 of 10 ( Start time: 10:14:47 PM, 06 February 2022 )

*What will be the value of 'a' in the given divide difference table?*

| $x$ | $y$ | $1stD.D$ | $2ndD.D$ | $3rdD.D$ |
|---|---|---|---|---|
| 1 | 0.4 | 0.25 | 0.0375 | −0.0104 |
| 3 | 0.9 | 0.4 | $a$ | |
| 5 | 1.7 | 0.3 | | |
| 7 | 2.3 | | | |



Select the correct option

- -0.025
- -0.0109
- -0.0343
- -0.0012

Click to Save Answer & M

MTH603 - Numerical Analysis (Quiz No.3) Quiz Start Time: 10:08

Question # 8 of 10 ( Start time: 10:14:03 PM, 06 February 2022 )

*What will be the value of 'a' in the given divide difference table?*

| $x$ | $y$ | $1stD.D$ | $2ndD.D$ | $3rdD.D$ |
|---|---|---|---|---|
| 2 | 0.5 | 0.3 | $a$ | |
| 4 | 1.1 | 0.3 | $-0.0125$ | $-0.0021$ |
| 6 | 1.7 | 0.25 | | |
| 8 | 2..2 | | | |

Select the correct option

- 0.0612
- 0
- 0.0893
- 0.0115



Click to Save Answer & Mov

BC180403728: AROOBA KHAN

MTH603 - Numerical Analysis (Quiz No.3) Quiz

Question # 4 of 10 ( Start time: 10:10:55 PM, 06 February 2022 )

If any ten data points are given,the degree of Lagrange's interpolation polynomial could be



Select the correct option

- nine
- eleven
- twelve
- ten

Click to S

Question # 7 of 10 ( Start time: 10:13:20 PM, 06 February 2022 )

Given the following data x:1 2 7 11 y:6 10 13 37 Which formula is useful in finding the interpolating polynomial?

Select the correct option

- Lagrange's interpolation formula
- Newton's forward difference interpolation formula
- Newton's backward difference interpolation formula
- None

Click to Save Answer &

f 10 ( Start time: 10:12:08 PM, 06 February 2022 )

*For the given data* points $(1, 0.3)$, $(3, 1)$, *and* $(5, 1.2)$ *the divide difference table will be given as*

ect option

Reload Ma

| $x$ | $y$ | $1stD.D$ | $2ndD.D$ |
|---|---|---|---|
| 2 | 0.3 | 0.35 | |
| 4 | 1 | 0.1 | $-0.525$ |
| 6 | 1.2 | | |

| $x$ | $y$ | $1stD.D$ | $2ndD.D$ |
|---|---|---|---|
| 2 | 0.3 | 0.35 | |
| 4 | 1 | 0.1 | $-0.125$ |
| 6 | 1.2 | | |

| $x$ | $y$ | $1stD.D$ | $2ndD.D$ |
|---|---|---|---|
| 2 | 0.3 | 0.35 | |
| 4 | 1 | 0.1 | $-0.225$ |
| 6 | 1.2 | | |

| $x$ | $y$ | $1stD.D$ | $2ndD.D$ |
|---|---|---|---|
| 2 | 0.3 | 0.35 | |
| 4 | 1 | 0.1 | $-0.0625$ |
| 6 | 1.2 | | |

Click to Save Answer & Move to Ne

**Question # 1 of 10 ( Start time: 10:08:40 PM, 06 February 2022 )**

x: 13 7 f(x): 14 9 f(3) Can be found using



**Select the correct option**

- Newton's backward difference formula
- None of the given choices
- Newton's forward difference formula
- Lagrange's interpolation formula

Click to Save Ans

Question # 2 of 10 ( Start time: 10:09:19 PM, 06 February 2022 )

Given the following data x:0 1 4 y:2 1 4 Value of first order divided difference y[0,1]is



Select the correct option

- 1
- -2
- -1
- 2

Click

503 - Numerical Analysis (Quiz No.3) Quiz Start Time: 10:08 PM,

tion # 5 of 10 ( Start time: 10:11:28 PM, 06 February 2022 )

*Which of the following method can be used for* interpolation *for the given values of* $x$ *and* $y$*?*

| $x$ | 3 | 4 | 6 |
|---|---|---|---|
| $y$ | 0.067 | 0.248 | 0.518 |

t the correct option

Reload

- Newton's interpolation formula
- Lagrange's interpolation formula
- Newton's backward difference formula
- Newton's forward difference formula

Click to Save Answer & Move to

MC210200645: MUHAMMAD SHEHZAD

Time Left 88 sec(s)

MTH603 - Numerical Analysis (Quiz No.3)

Quiz Start Time: 05:38 PM, 06 February 2022

Question # 5 of 10 ( Start time: 05:41:47 PM, 06 February 2022 )

Total Marks: 1

Given the following data x1 3 8 y2 4 9 f(3) can be found by using

Select the correct option

Reload Math Equations

- Newton's backward difference interpolation formula
- None
- Newton's forward difference interpolation formula
- Lagrange's interpolation formula

Click to Save Answer & Move to Next Question

MC210200645: MUHAMMAD SHEHZAD

Time Left 84 sec(s)

MTH603 - Numerical Analysis (Quiz No.3)

Quiz Start Time: 05:38 PM, 06 February 2022

Question # 2 of 10 ( Start time: 05:39:09 PM, 06 February 2022 )

Total Marks: 1

If there are (n+2) values of y corresponding to (n+2) values of x, then we can represent the function f(x) by a polynomial of degree

Select the correct option

Reload Math Equations

- n+1
- n-1
- n+2
- n

Click to Save Answer & Move to Next Question

time: 10:10:10 PM, 06 February 2022 )

*For the given divide difference table*

| $x$ | $y$ | $1stD.D$ | $2ndD.D$ |
|---|---|---|---|
| 2 | 2.2 | 0.325 | |
| 6 | 3.5 | 0.15 | $-0.0219$ |
| 10 | 4.1 | | |

*the Newton's divide difference* interpolation *formula will be*

Reload Math

$y = f(x) = 2.2 + (x - 12)(0.325) + (x - 6)((x - 2)(-0.0219)$

$y = f(x) = 2.2 + (x - 6)(0.325) + (x - 12)((x - 6)(-0.0219)$

$y = f(x) = 2.2 + (x - 2)(0.325) + (x - 2)((x - 6)(-0.0219)$

$y = f(x) = 2.2 + (x - 2)((x - 6)(0.325) + (x - 2)(-0.0219)$

Click to Save Answer & Move to Next

MC210201944: KASHIF RAZA

Time Left 87 sec(s)

MTH603 - Numerical Analysis (Quiz No.3)

Quiz Start Time: 05:15 PM, 06 February 2022

Question # 8 of 10 ( Start time: 05:21:53 PM, 06 February 2022 )

Total Marks: 1

*If any three data points are given, the formula for Lagrange's interpolation polynomial will be*

Select the correct option

Reload Math Equations

- $y = f(x) = \frac{(x_0 - x_1)(x_0 - x_2)}{(x - x_1)(x - x_2)} y_0 + \frac{(x_1 - x_0)(x_1 - x_2)}{(x - x_0)(x - x_2)} y_1 + \frac{(x_2 - x_0)(x_2 - x_1)}{(x - x_0)(x - x_1)} y_2$
- $y = f(x) = \frac{(x - x_1)(x - x_2)}{(x_0 - x_1)(x_0 - x_2)} y_0 + \frac{(x - x_0)(x - x_2)}{(x_1 - x_0)(x_1 - x_2)} y_1 + \frac{(x - x_0)(x - x_1)}{(x_2 - x_0)(x_2 - x_1)} y_2$
- $y = f(x) = \frac{(x - x_1)(x - x_2)}{(x_1 - x_0)(x_1 - x_2)} y_0 + \frac{(x - x_0)(x - x_2)}{(x_0 - x_1)(x_0 - x_2)} y_1 + \frac{(x - x_0)(x - x_1)}{(x_2 - x_0)(x_2 - x_1)} y_2$
- $y = f(x) = \frac{(x - x_1)(x - x_2)}{(x_0 - x_1)(x_0 - x_2)} y_2 + \frac{(x - x_0)(x - x_2)}{(x_1 - x_0)(x_1 - x_2)} y_1 + \frac{(x - x_0)(x - x_1)}{(x_2 - x_0)(x_2 - x_1)} y_0$

Click to Save Answer & Move to Next Question

راشد حسین

uestion # 7 of 10 ( Start time: 05:34:16 PM, 06 February 2022 )

Newton's divided difference interpolation formula is used when the values of the independent variable are

elect the correct option

- Equally spaced
- None
- Not equally spaced
- Constant

Click to Save

MC210201944: KASHIF RAZA

Time Left 89 sec(s)

MTH603 - Numerical Analysis (Quiz No.3)

Quiz Start Time: 05:15 PM, 06 February 2022

Question # 6 of 10 ( Start time: 05:20:20 PM, 06 February 2022 )

Total Marks: 1

Newton's divided difference interpolation formula is used when the values of the independent variable are

Select the correct option

Reload Math Equations

- Not equally spaced
- None
- Equally spaced
- Constant

Click to Save Answer & Move to Next Question

MC210201944: KASHIF RAZA

Time Left 89 sec(s)

MTH603 - Numerical Analysis (Quiz No.3)

Quiz Start Time: 05:15 PM, 06 February 2022

Question # 5 of 10 ( Start time: 05:19:29 PM, 06 February 2022 )

Total Marks: 1

Differential operator in terms of forward difference operator is given by

Select the correct option

Reload Math Equations

- $D=\frac{1}{h}(\Delta-\frac{\Delta^2}{2!}+\frac{\Delta^3}{3!}-\frac{\Delta^4}{4!}+\frac{\Delta^5}{5!}-\ldots)$
- $D=\frac{1}{h}(\Delta+\frac{\Delta^2}{2}+\frac{\Delta^3}{3}+\frac{\Delta^4}{4}+\frac{\Delta^5}{5}+\ldots)$
- $D=\frac{1}{h}(\Delta+\frac{\Delta^2}{2!}+\frac{\Delta^3}{3!}+\frac{\Delta^4}{4!}+\frac{\Delta^5}{5!}+\ldots)$
- $D=\frac{1}{h}(\Delta-\frac{\Delta^2}{2}+\frac{\Delta^3}{3}-\frac{\Delta^4}{4}+\frac{\Delta^5}{5}-\ldots)$

Click to Save Answer & Move to Next Question

MC210201944: KASHIF RAZA

Time Left 89 sec(s)

MTH603 - Numerical Analysis (Quiz No.3)

Quiz Start Time: 05:15 PM, 06 February 2022

Question # 4 of 10 ( Start time: 05:18:26 PM, 06 February 2022 )

Total Marks: 1

*For the giev three data points, the degree of Lagrange's interpolation polynomial could be*

| $x$ | 0.3 | 0.7 | 0.9 |
|---|---|---|---|
| $y$ | 0.067 | 0.248 | 0.518 |

Select the correct option

Reload Math Equations

- $y = f(x) = \frac{(x-0.7)(x-0.9)}{(0.3-0.7)(0.3-0.9)}(0.518) + \frac{(x-0.3)(x-0.9)}{(0.7-0.3)(0.7-0.9)}(0.248) + \frac{(x-0.3)(x-0.7)}{(0.9-0.3)(0.9-0.7)}(0.067)$
- $y = f(x) = \frac{(x-0.7)(x-0.9)}{(0.3-0.7)(0.3-0.9)}(0.067) + \frac{(x-0.3)(x-0.9)}{(0.7-0.3)(0.7-0.9)}(0.518) + \frac{(x-0.3)(x-0.7)}{(0.9-0.3)(0.9-0.7)}(0.248)$
- $y = f(x) = \frac{(x-0.7)(x-0.9)}{(0.3-0.7)(0.3-0.9)}(0.248) + \frac{(x-0.3)(x-0.9)}{(0.7-0.3)(0.7-0.9)}(0.067) + \frac{(x-0.3)(x-0.7)}{(0.9-0.3)(0.9-0.7)}(0.518)$
- $y = f(x) = \frac{(x-0.7)(x-0.9)}{(0.3-0.7)(0.3-0.9)}(0.067) + \frac{(x-0.3)(x-0.9)}{(0.7-0.3)(0.7-0.9)}(0.248) + \frac{(x-0.3)(x-0.7)}{(0.9-0.3)(0.9-0.7)}(0.518)$

Click to Save Answer & Move to Next Question

راشد حسین

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MC210201944: KASHIF RAZA

Time Left 88 sec(s)

MTH603 - Numerical Analysis (Quiz No.3)

Quiz Start Time: 05:15 PM, 06 February 2022

Question # 3 of 10 ( Start time: 05:17:06 PM, 06 February 2022 )

Total Marks: 1

For the given data points $(4, 45)$, $(5, 104)$, and $(6, 190)$, the zero − order divide difference will be

Select the correct option

Reload Math Equations

- 35
- 42
- 46
- none

Click to Save Answer & Move to Next Question

MTH603 - Numerical Analysis (Quiz No.3) Quiz Start Time: 0

Question # 8 of 10 ( Start time: 04:51:31 PM, 06 February 2022 )

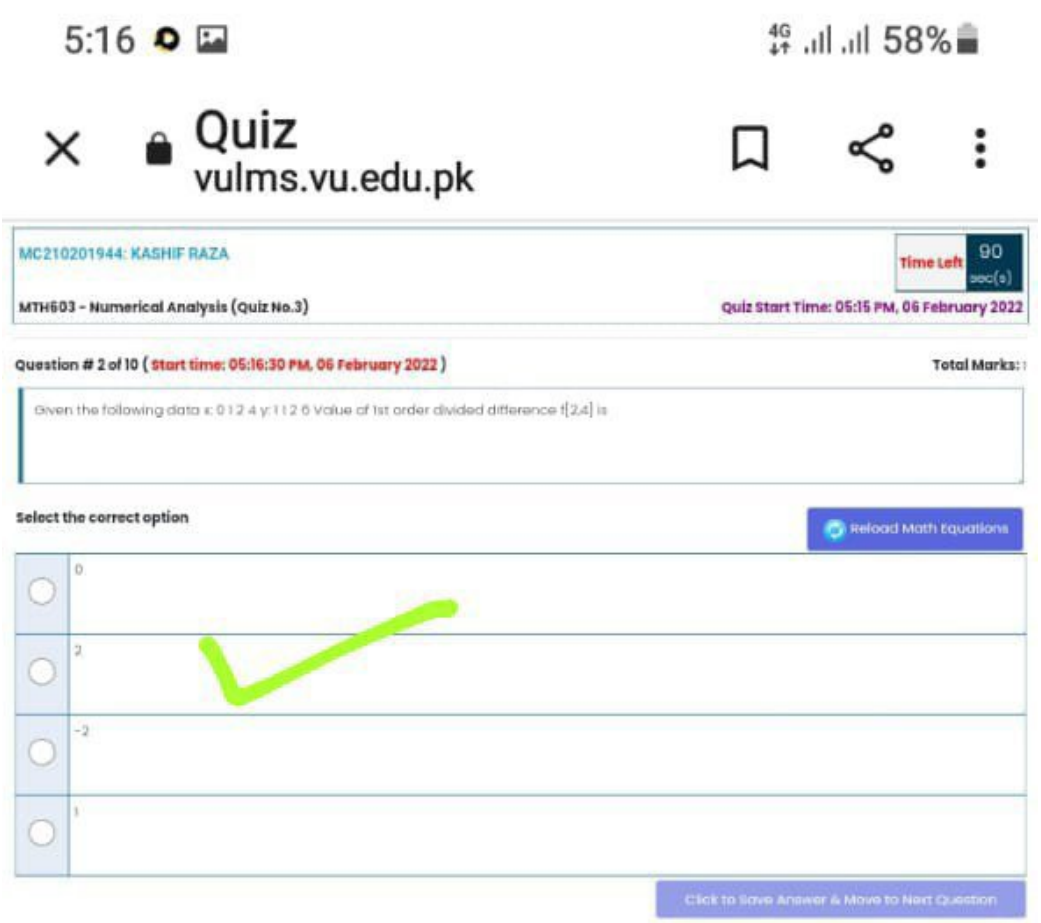
*What will be the value of 'a' in the given divide diffidence table?*

| $x$ | $y$ | $1stD.D$ | $2ndD.D$ | $3rdD.D$ |
|---|---|---|---|---|
| 1 | 0.7 | 0.25 | 0.025 | |
| 3 | 1.2 | 0.35 | −0.0625 | $a$ |
| 5 | 1.9 | 0.1 | | |
| 7 | 2.1 | | | |

Select the correct option

- -0.0021
- -0.0245
- -0.0146
- -0.0387

Click to Save Answer &



TH603 - Numerical Analysis (Quiz No.3) Quiz Start Time: 04:46 PM

estion # 9 of 10 ( Start time: 04:52:22 PM, 06 February 2022 )

*For the given data points $(2,5)$, $(4,7)$, and $(6,9)$, the zero – order divide difference will be*

lect the correct option

Reloc

1

0

5

2



Click to Save Answer & Move

MTH603 - Numerical Analysis (Quiz No.3) Quiz Start Time: 04:46 PM, 06 Feb

Question # 6 of 10 ( Start time: 04:49:48 PM, 06 February 2022 ) T

For the given data points $(1, -3)$, $(2, 0)$, and $(3, 15)$, the zero − order divide difference will be

Select the correct option

Reload Math

- -3
- -1
- 0
- -2

Click to Save Answer & Move to Next

MC210203259: ALI HAIDER

MTH603 - Numerical Analysis (Quiz No.3) Quiz St

Question # 4 of 10 ( Start time: 04:48:15 PM, 06 February 2022 )

Given the following data x: 0 1 2 4 y: 1 1 2 6 Value of 1st order divided difference f[2,4] is

Select the correct option

- -2
- 2
- 0
- 1

Click to Save

**Question # 5 of 10 ( Start time: 04:49:09 PM, 06 February 2022 )**

In Lagrange's interpolation, for the given five points we can represent the function f (x) by a polynomial of degree

**Select the correct option**

- 3
- 5
- 6
- 4



Click to Save Answer &

MTH603 - Numerical Analysis (Quiz No.3) Quiz Start Time: 04:46 PM,

Question # 7 of 10 ( Start time: 04:50:32 PM, 06 February 2022 )

*For the given four data* points, *the* degree *of Lagrange's* interpolation *polynomial could be*

| $x$ | 0.3 | 0.7 | 0.9 | 1.0 |
|---|---|---|---|---|
| $y$ | 0.067 | 0.248 | 0.518 | 0.6812 |

Select the correct option



Reload

- four
- five
- six
- three

Click to Save Answer & Move to

MC210203259: ALI HAIDER

MTH603 - Numerical Analysis (Quiz No.3) Quiz Start Time:

Question # 2 of 10 ( Start time: 04:46:49 PM, 06 February 2022 )

Lagrange's interpolation formula is used when the values of the independent variable are

Select the correct option

- Equally spaced
- Not equally spaced
- Constant
- None

Click to Save Answer

*For the given divide difference table*

| $x$ | $y$ | $1stD.D$ | $2ndD.D$ |
|---|---|---|---|
| 1 | 2.2 | 0.4333 | |
| 4 | 3.5 | 0.2 | $-0.0389$ |
| 7 | 4.1 | | |

*the Newton's divide difference* interpolation *formula will be*

e correct option

Reic

$y = f(x) = -0.0389 + (x-1)(0.4333) + (x-1)((x-4)(2.2)$

$y = f(x) = -0.0389 + (x-1)(2.2) + (x-1)((x-4)(0.4333)$

$y = f(x) = 2.2 + (x-1)(-0.0389) + (x-1)((x-4)(0.4333)$

$y = f(x) = 2.2 + (x-1)(0.4333) + (x-1)((x-4)(-0.0389)$

Click to Save Answer & Move

MC210200645: MUHAMMAD SHEHZAD

Time Left 88 sec(s)

MTH603 - Numerical Analysis (Quiz No.3)

Quiz Start Time: 05:38 PM, 06 February 2022

Question # 8 of 10 ( Start time: 05:43:27 PM, 06 February 2022 )

Total Marks: 1

*Which of the following method can be used for* interpolation *for the given values of* $x$ *and* $y$*?*

| $x$ | 0.3 | 0.7 | 0.9 |
|---|---|---|---|
| $y$ | 0.067 | 0.248 | 0.518 |

Select the correct option

Reload Math Equations

- Newton's interpolation formula
- Newton's backward difference formula
- Newton's forward difference formula
- Lagrange's interpolation formula

Click to Save Answer & Move to Next Question

MC210203259: ALI HAIDER

MTH603 - Numerical Analysis (Quiz No.3) Quiz Start Time: 04:4

Question # 1 of 10 ( Start time: 04:46:05 PM, 06 February 2022 )

: What will be the value of first order divided difference f[1,5]for the following data x:0 1 5 y:2 1 5

Select the correct option

- 0
- 3
- 2
- 1 ✓

Click to Save Answer & Mo

Quiz

Not secure | https://vulms.vu.edu.pk/Quiz/QuizQuestion.aspx?ver=dd7048d6-1c46-406d-8bd6-c1d0b1b45fa2

MTH603 - Numerical Analysis (Quiz No.3)

Quiz Start Time: 06:32 PM, 06 February 202

Question # 1 of 10 ( Start time: 06:32:01 PM, 06 February 2022 )

Total Marks:

For the given data points $(1, -3)$, $(2, 0)$, and $(3, 15)$, the zero − order divide difference will be

Select the correct option

Reload Math Equations

- -2
- -3
- -1

MC210200645: MUHAMMAD SHEHZAD

Time Left 88 sec(s)

MTH603 - Numerical Analysis (Quiz No.3)

Quiz Start Time: 05:38 PM, 06 February 2022

Question # 5 of 10 ( Start time: 05:41:47 PM, 06 February 2022 )

Total Marks: 1

Given the following data x1 3 8 y2 4 9 f(3) can be found by using

Select the correct option

Reload Math Equations

- Newton's backward difference interpolation formula
- None
- Newton's forward difference interpolation formula
- Lagrange's interpolation formula

Click to Save Answer & Move to Next Question

MC210200645: MUHAMMAD SHEHZAD

Time Left 88 sec(s)

MTH603 - Numerical Analysis (Quiz No.3)

Quiz Start Time: 05:38 PM, 06 February 2022

Question # 4 of 10 ( Start time: 05:40:57 PM, 06 February 2022 )

Total Marks: 1

In Lagrange's interpolation, for the given five points we can represent the function f (x) by a polynomial of degree

Select the correct option

- 3
- 5
- 4
- 6

Click to Save Answer & Move to Next Question

MC210200645: MUHAMMAD SHEHZAD

Time Left 89 sec(s)

MTH603 - Numerical Analysis (Quiz No.3)

Quiz Start Time: 05:38 PM, 06 February 2022

Question # 9 of 10 ( Start time: 05:44:00 PM, 06 February 2022 )

Total Marks: 1

For the given data points $(2,5)$, $(4,7)$, and $(6,9)$, the first $-$ order divide difference will be

Select the correct option

Reload Math Equations

1

5

2

0

Click to Save Answer & Move to Next Question

MC210200645: MUHAMMAD SHEHZAD

Time Left 87 sec(s)

MTH603 - Numerical Analysis (Quiz No.3)

Quiz Start Time: 05:38 PM, 06 February 2022

Question # 3 of 10 ( Start time: 05:40:16 PM, 06 February 2022 )

Total Marks: 1

For the given data points $(4, 45)$, $(5, 104)$, and $(6, 190)$, the first $-$ order divide difference will be

Select the correct option

Reload Math Equations

- none
- 76
- 82
- 59

Click to Save Answer & Move to Next Question

MC210200645: MUHAMMAD SHEHZAD

Time Left 84 sec(s)

MTH603 - Numerical Analysis (Quiz No.3)

Quiz Start Time: 05:38 PM, 06 February 2022

Question # 2 of 10 ( Start time: 05:39:09 PM, 06 February 2022 )

Total Marks: 1

If there are (n+2) values of y corresponding to (n+2) values of x, then we can represent the function f(x) by a polynomial of degree



Select the correct option

Reload Math Equations

- n+1
- n-1
- n+2
- n

Click to Save Answer & Move to Next Question

MC210200645: MUHAMMAD SHEHZAD

Time Left 89 sec(s)

MTH603 - Numerical Analysis (Quiz No.3)

Quiz Start Time: 05:38 PM, 06 February 2022

Question # 6 of 10 ( Start time: 05:42:25 PM, 06 February 2022 )

Total Marks: 1

For the given data points $(2,5)$, $(4,7)$, and $(6,9)$, the zero − order divide difference will be

Select the correct option

Reload Math Equations

- 0
- 1
- 2
- 5

Click to Save Answer & Move to Next Question

Question # 8 of 10 ( Start time: 05:35:01 PM, 06 February 2022 )

*What will be the value of 'a' in the given divide difference table?*

| $x$ | $y$ | $1stD.D$ | $2ndD.D$ | $3rdD.D$ |
|---|---|---|---|---|
| 1 | 0.4 | 0.25 | 0.0375 | −0.0104 |
| 3 | 0.9 | 0.4 | $a$ | |
| 5 | 1.7 | 0.3 | | |
| 7 | 2.3 | | | |

Select the correct option

- -0.0012
- -0.025
- -0.0109
- -0.0343

Click to Save Answ

MC210200645: MUHAMMAD SHEHZAD

Time Left 88 sec(s)

MTH603 - Numerical Analysis (Quiz No.3)

Quiz Start Time: 05:38 PM, 06 February 2022

Question # 1 of 10 ( Start time: 05:38:40 PM, 06 February 2022 )

Total Marks: 1

The first divide difference $y[x_0, x_1]$ can be given as

Select the correct option

Reload Math Equations

- $\frac{\nabla y_1}{h}$
- $\frac{y_1 - y_0}{x_1 - x_0}$
- All
- $\frac{\Delta y_0}{h}$

Click to Save Answer & Move to Next Question

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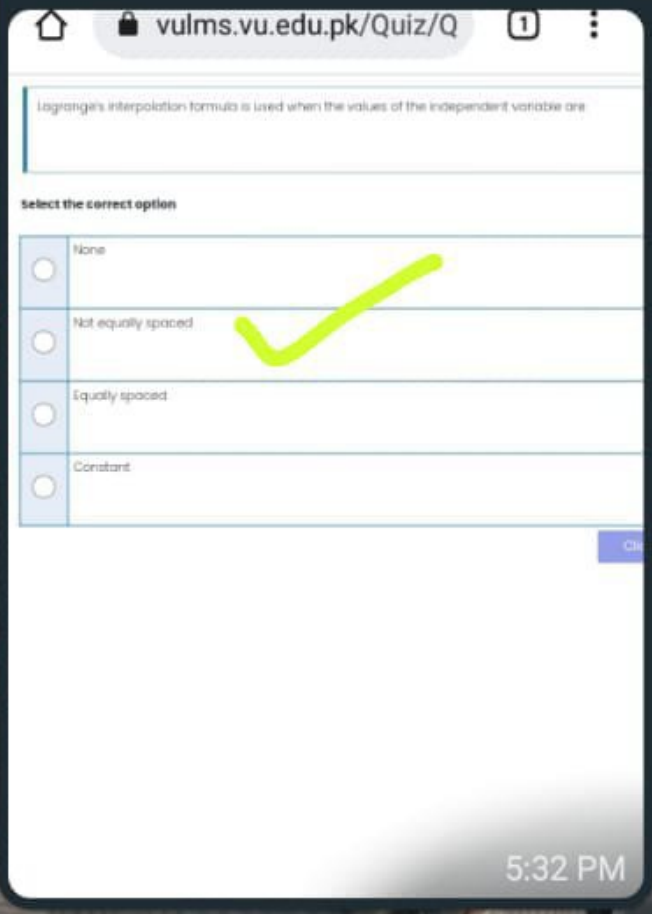


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TH603 - Numerical Analysis (Quiz No.3)

Quiz Start Time: 05:29 PM, 06 Februa

estion # 5 of 10 ( start time: 05:32:46 PM, 06 February 2022 )

Total

*For the given data points* $(x_0, y_0)$, $(x_1 y_1)$, $(x_2 y_2)$, *and* $(x_3, y_3)$ *the first − order divide difference will be given as*

lect the correct option

Reload Math Equa

- $y[y_0, y_1, y_2]$
- $y[x_0]$
- $y[x_0, x_1]$
- $y[x_0, x_1, x_2]$

Click to Save Answer & Move to Next Ques

TH603 - Numerical Analysis (Quiz No.3) Quiz Start Time: 05:29 PM, 06 F

uestion # 10 of 10 ( Start time: 05:36:46 PM, 06 February 2022 )

*Which of the following method can be used for* interpolation *for the given values of* $x$ *and* $y$*?*

| $x$ | 3 | 4 | 6 |
|---|---|---|---|
| $y$ | 0.067 | 0.248 | 0.518 |

lect the correct option

Reload Mat

- Newton's interpolation formula
- Newton's backward difference formula
- Lagrange's interpolation formula
- Newton's forward difference formula

Click to Save Answer & Move to Nex

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MC210204695: MIAN MASOOD KHAN

Time Le

MTH603 - Numerical Analysis (Quiz No.3)

Quiz Start Time: 05:29 PM, 06 Febr

Question # 9 of 10 ( Start time: 05:35:52 PM, 06 February 2022 )

Tot

For the given data points $(1, -3)$, $(2, 0)$, and $(3, 15)$, the first − order divide difference will be

Select the correct option

Reload Math Eq

- 2
- -2
- 3
- -3

Click to Save Answer & Move to Next Qu

Lagrange's interpolation formula is used when the values of the independent variable are

**Select the correct option**

- None
- Not equally spaced
- Equally spaced
- Constant

Cli

uestion # 3 of 10 ( Start time: 05:31:12 PM, 06 February 2022 )

In Lagrange's interpolation, for the given five points we can represent the function f (x) by a polynomial of degree

elect the correct option

- 3
- 5
- 6
- 4



Click to Save Answ

**Question # 6 of 10 ( Start time: 05:33:28 PM, 06 February 2022 )**

Given the following data x:1 2 5 y:1 4 10 Value of 1st order divided difference f[2 , 5] is

**Select the correct option**

- 2
- -2
- 0
- 1

MC210201944: KASHIF RAZA

Time Left 89 sec(s)

MTH603 - Numerical Analysis (Quiz No.3)

Quiz Start Time: 05:15 PM, 06 February 2022

Question # 9 of 10 ( Start time: 05:22:37 PM, 06 February 2022 )

Total Marks: 1

For the given data points $(1,-3)$, $(2,0)$, and $(3,15)$, the first − order divide difference will be

Select the correct option

Reload Math Equations

- -3
- -2
- 2
- 3

Click to Save Answer & Move to Next Question

MC210204695: MIAN MASOOD KHAN

Time Left 80 sec(s)

MTH603 - Numerical Analysis (Quiz No.3)

Quiz Start Time: 05:29 PM, 06 February 2022

Question # 2 of 10 ( Start time: 05:30:21 PM, 06 February 2022 )

Total Marks: 1

*For the given data points $(x_0\, y_0)$, $(x_1\, y_1)$, $(x_2 y_2)$, and $(x_3\, y_3)$ the second − order divide difference will be given as*

Select the correct option

Reload Math Equations

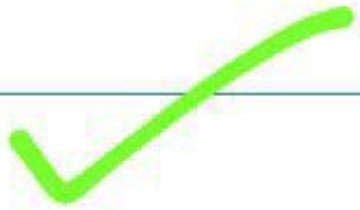
| | |
|---|---|
| ○ | $y[x_0, x_1]$ |
| ○ | $y[x_0, x_1, x_2]$ |
| ○ | $y[x_0]$ |
| ○ | $y[x_0, x_1, x_2, x_3]$ |

Click to Save Answer & Move to Next Question

If any ten data points are given,the degree of Lagrange's interpolation polynomial could be

**Select the correct option**

- ◯ eleven
- ◯ nine
- ◯ ten
- ◯ twelve



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Question # 10 of 10 ( Start time: 06:28:44 PM, 06 February 2022 ) Total Marks: 1

If y(x) is approximated by a polynomial $P_n(x)$ of degree n then the error is given by

Select the correct option

Reload Math Equations

| | |
|---|---|
| ○ | $\varepsilon(x) = y(x) + P_n(x)$ |
| ○ | $\varepsilon(x) = y(x) \times P_n(x)$ |
| ○ | $\varepsilon(x) = y(x) \div P_n(x)$ |
| ○ | $\varepsilon(x) = y(x) - P_n(x)$ |

Click to Save Answer & Move to Next Question

Question # 9 of 10 ( Start time: 06:27:43 PM, 06 February 2022 ) Total Marks: 1

*For the given data* points $(4, 2.2)$, $(8, 3.5)$, *and* $(12, 4.1)$ *the divide difference table will be given as*

Select the correct option

Reload Math Equations

| | $x$ | $y$ | $1stD.D$ | $2ndD.D$ |
|---|---|---|---|---|
| ○ | 4 | 2.2 | 0.325 | |
| | 8 | 3.5 | 0.15 | $-0.098$ |
| | 12 | 4.1 | | |

| | $x$ | $y$ | $1stD.D$ | $2ndD.D$ |
|---|---|---|---|---|
| ○ | 4 | 2.2 | 0.325 | |
| | 8 | 3.5 | 0.15 | $-0.0219$ |
| | 12 | 4.1 | | |

| | $x$ | $y$ | $1stD.D$ | $2ndD.D$ |
|---|---|---|---|---|
| ○ | 4 | 2.2 | 0.325 | |
| | 8 | 3.5 | 0.15 | $-0.0108$ |
| | 12 | 4.1 | | |

| | $x$ | $y$ | $1stD.D$ | $2ndD.D$ |
|---|---|---|---|---|
| ○ | 4 | 2.2 | 0.325 | |
| | 8 | 3.5 | 0.15 | $-0.065$ |
| | 12 | 4.1 | | |

Click to Save Answer & Move to Next Question

Question # 6 of 10 ( Start time: 06:24:28 PM, 06 February 2022 ) Total Marks: 1

$For\ the\ given\ data\ \text{points}\ (4, 45),\ (5, 104),\ and\ (6, 190),\ the\ \text{first} - order\ divide\ difference\ will\ be$

Select the correct option

Reload Math Equations

- 82
- 59
- 76
- none

Click to Save Answer & Move to Next Question

Question # 8 of 10 ( Start time: 06:26:41 PM, 06 February 2022 )
Total Marks: 1

What will be the value of first order divided difference f[1,5]for the following data x0 1 5 y2 1 5

Select the correct option

Reload Math Equations

- 1
- 0
- 2
- 3

Click to Save Answer & Move to Next Question

Question # 7 of 10 ( Start time: 06:25:29 PM, 06 February 2022 ) Total Marks: 1

Given the following data x:0 1 4 y:2 1 4 Value of first order divided difference y[0,1]is

Select the correct option

Reload Math Equations

- 1
- -1
- 2
- -2

Click to Save Answer & Move to Next Question

MTH603 - Numerical Analysis (Quiz No.3)

Quiz Start Time: 06:19 PM, 06 February 2022

Question # 5 of 10 ( Start time: 06:23:06 PM, 06 February 2022 )

Total Marks: 1

Given the following data x:0 1 4 8 y:1 1 8 16 Value of 1st order divided difference f[4,8] is

Select the correct option



Reload Math Equations

- 8
- 2
- 4
- 6

Click to Save Answer & Move to Next Question

Question # 3 of 10 ( Start time: 06:22:09 PM, 06 February 2022 ) Total Marks: 1

*For the given data* points $(2, 0.3)$, $(4, 1)$, *and* $(6, 1.2)$ *the divide difference table will be given as*

Select the correct option

Reload Math Equations

| | $x$ | $y$ | $1stD.D$ | $2ndD.D$ |
|---|---|---|---|---|
| ○ | 2 | 0.3 | $-0.0625$ | |
| | 4 | 1 | 0.1 | 0.35 |
| | 6 | 1.2 | | |

| | $x$ | $y$ | $1stD.D$ | $2ndD.D$ |
|---|---|---|---|---|
| ○ | 2 | 0.3 | 0.1 | |
| | 4 | 1 | $-0.0625$ | 0.35 |
| | 6 | 1.2 | | |

| | $x$ | $y$ | $1stD.D$ | $2ndD.D$ |
|---|---|---|---|---|
| ○ | 2 | 0.3 | $-0.0625$ | |
| | 4 | 1 | 0.35 | 0.1 |
| | 6 | 1.2 | | |

| | $x$ | $y$ | $1stD.D$ | $2ndD.D$ |
|---|---|---|---|---|
| ○ | 2 | 0.3 | 0.35 | |
| | 4 | 1 | 0.1 | $-0.0625$ |
| | 6 | 1.2 | | |



Click to Save Answer & Move to Next Question

Question # 2 of 10 ( Start time: 06:20:22 PM, 06 February 2022 )
Total Marks: 1

For the given data points $(2,5)$, $(4,7)$, and $(6,9)$, the zero − order divide difference will be

Select the correct option



Reload Math Equations

- 5
- 2
- 1
- 0

Click to Save Answer & Move to Next Question

Question # 1 of 10 ( Start time: 06:35:07 PM, 06 February 2022 )
Total Marks: 1

*For the given divide difference table*

| $x$ | $y$ | $1stD.D$ | $2ndD.D$ |
|---|---|---|---|
| 1 | 2.2 | 0.4333 | |
| 4 | 3.5 | 0.2 | −0.0389 |
| 7 | 4.1 | | |

*the Newton`s divide difference* interpolation *formula will be*

Select the correct option

Reload Math Equations

- $y = f(x) = 2.2 + (x - 1)(-0.0389) + (x - 1)(x - 4)(0.4333)$
- $y = f(x) = -0.0389 + (x - 1)(0.4333) + (x - 1)(x - 4)(2.2)$
- $y = f(x) = 2.2 + (x - 1)(0.4333) + (x - 1)(x - 4)(-0.0389)$ ✓
- $y = f(x) = -0.0389 + (x - 1)(2.2) + (x - 1)(x - 4)(0.4333)$

Click to Save Answer & Move to Next Question

MC210200757: ABBAS RAZA

Time Left 78 sec(s)

MTH603 - Numerical Analysis (Quiz No.3)

Quiz Start Time: 06:35 PM, 06 February 2022

Question # 10 of 10 ( Start time: 06:44:57 PM, 06 February 2022 )

Total Marks: 1

For the given data points $(4, 1.3)$, $(8, 1.5)$, and $(12, 1.9)$ the divide difference table will be given as

Select the correct option

Reload Math Equations

| $x$ | $y$ | $1stD.D$ | $2ndD.D$ |
|---|---|---|---|
| 4 | 1.3 | 0.1 | |
| 8 | 1.5 | 0.0062 | 0.05 |
| 12 | 1.9 | | |

| $x$ | $y$ | $1stD.D$ | $2ndD.D$ |
|---|---|---|---|
| 4 | 1.3 | 0.1 | |
| 8 | 1.5 | 0.35 | 0.0062 |
| 12 | 1.9 | | |

| $x$ | $y$ | $1stD.D$ | $2ndD.D$ |
|---|---|---|---|
| 4 | 1.3 | 0.0062 | |
| 8 | 1.5 | 0.1 | 0.05 |
| 12 | 1.9 | | |

| $x$ | $y$ | $1stD.D$ | $2ndD.D$ |
|---|---|---|---|
| 4 | 1.3 | 0.05 | |
| 8 | 1.5 | 0.1 | 0.0062 |
| 12 | 1.9 | | |

Click to Save Answer & Move to Next Question

MTH603 - Numerical Analysis (Quiz No.3)

Quiz Start Time: 06:19 PM, 06 February 2022

Question # 1 of 10 ( Start time: 06:19:34 PM, 06 February 2022 )

Total Marks: 1

Lagrange's interpolation formula is used when the values of the independent variable are

Select the correct option



Reload Math Equations

- Constant
- Not equally spaced
- None
- Equally spaced

Click to Save Answer & Move to Next Question

MC210200757: ABBAS RAZA

Time Left 87 sec(s)

MTH603 - Numerical Analysis (Quiz No.3)

Quiz Start Time: 06:35 PM, 06 February 2022



Question # 5 of 10 ( Start time: 06:39:46 PM, 06 February 2022 )

Total Marks: 1

In Lagrange's interpolation, for n values of y corresponding to n values of x, we can represent the function f (x) by a polynomial of degree

Select the correct option

- n+2
- n+1
- n-1
- n

Click to Save Answer & Move to Next Question

MC210200757: ABBAS RAZA

Time Left 88 sec(s)

MTH603 - Numerical Analysis (Quiz No.3)

Quiz Start Time: 06:35 PM, 06 February 2022

Question # 9 of 10 ( Start time: 06:43:47 PM, 06 February 2022 )

Total Marks: 1

*If only two data points are given, the formula for Lagrange`s interpolation polynomial will be*

Select the correct option

Reload Math Equations

- $y = f(x) = \frac{(x - x_0)}{(x_0 - x_1)} y_0 + \frac{(x - x_1)}{(x_1 - x_0)} y_1$
- $y = f(x) = \frac{(x - x_0)}{(x_1 - x_0)} y_0 + \frac{(x - x_1)}{(x_0 - x_1)} y_1$
- $y = f(x) = \frac{(x - x_1)}{(x_0 - x_1)} y_0 + \frac{(x - x_0)}{(x_1 - x_0)} y_1$
- $y = f(x) = \frac{(x_1 - x_0)}{(x - x_0)} y_0 + \frac{(x_0 - x_1)}{(x - x_1)} y_1$

Click to Save Answer & Move to Next Question

MC210200757: ABBAS RAZA

Time Left 83 sec(s)

MTH603 - Numerical Analysis (Quiz No.3)

Quiz Start Time: 06:35 PM, 06 February 2022

Question # 6 of 10 ( Start time: 06:40:49 PM, 06 February 2022 )

Total Marks: 1

For the given four data points, the degree of Lagrange's interpolation polynomial could be

| $x$ | 0.3 | 0.7 | 0.9 | 1.0 |
|---|---|---|---|---|
| $y$ | 0.067 | 0.248 | 0.518 | 0.6812 |

Select the correct option

Reload Math Equations

- three
- five
- four
- six

Click to Save Answer & Move to Next Question

MC210200757: ABBAS RAZA

Time Left 81 sec(s)

MTH603 - Numerical Analysis (Quiz No.3)

Quiz Start Time: 06:35 PM, 06 February 2022

Question # 7 of 10 ( Start time: 06:41:39 PM, 06 February 2022 )

Total Marks: 1

Differential operator in terms of forward difference operator is given by

Select the correct option

Reload Math Equations

- $D = \frac{1}{h}(\Delta + \frac{\Delta^2}{2!} + \frac{\Delta^3}{3!} + \frac{\Delta^4}{4!} + \frac{\Delta^5}{5!} + \ldots)$
- $D = \frac{1}{h}(\Delta + \frac{\Delta^2}{2} + \frac{\Delta^3}{3} + \frac{\Delta^4}{4} + \frac{\Delta^5}{5} + \ldots)$
- $D = \frac{1}{h}(\Delta - \frac{\Delta^2}{2!} + \frac{\Delta^3}{3!} - \frac{\Delta^4}{4!} + \frac{\Delta^5}{5!} - \ldots)$
- (selected) $D = \frac{1}{h}(\Delta - \frac{\Delta^2}{2} + \frac{\Delta^3}{3} - \frac{\Delta^4}{4} + \frac{\Delta^5}{5} - \ldots)$

Click to Save Answer & Move to Next Question

Question # 2 of 10 ( Start time: 06:36:34 PM, 06 February 2022 ) Total Marks: 1

*If any three data points are given, the formula for Lagrange's interpolation polynomial will be*

Select the correct option

Reload Math Equations

- $y = f(x) = \frac{(x_0 - x_1)(x_0 - x_2)}{(x - x_1)(x - x_2)}y_0 + \frac{(x_1 - x_0)(x_1 - x_2)}{(x - x_0)(x - x_2)}y_1 + \frac{(x_2 - x_0)(x_2 - x_1)}{(x - x_0)(x - x_1)}y_2$
- $y = f(x) = \frac{(x - x_1)(x - x_2)}{(x_0 - x_1)(x_0 - x_2)}y_2 + \frac{(x - x_0)(x - x_2)}{(x_1 - x_0)(x_1 - x_2)}y_1 + \frac{(x - x_0)(x - x_1)}{(x_2 - x_0)(x_2 - x_1)}y_0$
- $y = f(x) = \frac{(x - x_1)(x - x_2)}{(x_1 - x_0)(x_1 - x_2)}y_0 + \frac{(x - x_0)(x - x_2)}{(x_0 - x_1)(x_0 - x_2)}y_1 + \frac{(x - x_0)(x - x_1)}{(x_2 - x_0)(x_2 - x_1)}y_2$
- $y = f(x) = \frac{(x - x_1)(x - x_2)}{(x_0 - x_1)(x_0 - x_2)}y_0 + \frac{(x - x_0)(x - x_2)}{(x_1 - x_0)(x_1 - x_2)}y_1 + \frac{(x - x_0)(x - x_1)}{(x_2 - x_0)(x_2 - x_1)}y_2$

Click to Save Answer & Move to Next Question

MTH603 - Numerical Analysis (Quiz No.3) Quiz Start Time: 06:35 PM, 06 February 2022

Question # 1 of 10 ( Start time: 06:35:07 PM, 06 February 2022 ) Total Marks: 1

For the given divide difference table

| $x$ | $y$ | $1stD.D$ | $2ndD.D$ |
|---|---|---|---|
| 1 | 2.2 | 0.4333 | |
| 4 | 3.5 | 0.2 | −0.0389 |
| 7 | 4.1 | | |

the Newton`s divide difference interpolation formula will be

Select the correct option

Reload Math Equations

- $y = f(x) = 2.2 + (x - 1)(-0.0389) + (x - 1)(x - 4)(0.4333)$
- $y = f(x) = 0.0389 + (x - 1)(0.4333) + (x - 1)(x - 4)(2.2)$
- $y = f(x) = 2.2 + (x - 1)(0.4333) + (x - 1)(x - 4)(-0.0389)$
- $y = f(x) = -0.0389 + (x - 1)(2.2) + (x - 1)(x - 4)(0.4333)$

Click to Save Answer & Move to Next Question

MTH603 - Numerical Analysis (Quiz No.3) Quiz Start Time: 06:35 PM, 06 February 2022

Question # 3 of 10 ( Start time: 06:38:07 PM, 06 February 2022 ) Total Marks: 1

In Lagrange's interpolation, for the given five points we can represent the function f (x) by a polynomial of degree

Select the correct option

- 6
- 5
- 4
- 3

Click to Save Answer & Move to Next Question