

IVS project 2

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Chapter 1

Namespace Index

1.1 Namespace List

Here is a list of all namespaces with brief descriptions:

Kalkulacka	9
Kalkulacka.Properties	9
MathComponentsNS	9
MathTest	9
Profiling	9

Chapter 2

Hierarchical Index

2.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

MathTest.BasicMathTests	11
Button	
Kalkulacka.ButtonEclipse	14
Form	
Kalkulacka.Form1	14
MathComponentsNS.MathComponents	29
Kalkulacka.Program	42
Profiling.Program	42

Chapter 3

Class Index

3.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

MathTest.BasicMathTests	11
Kalkulacka.ButtonEclipse	14
Kalkulacka.Form1	14
MathComponentsNS.MathComponents	29
Kalkulacka.Program	42
Profiling.Program	42

Chapter 4

File Index

4.1 File List

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Kalkulacka/ Form1.cs	43
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Kalkulacka/ Math.cs	44
Kalkulacka/ Program.cs	44
Kalkulacka/Properties/ AssemblyInfo.cs	45
Kalkulacka/Properties/ Resources.Designer.cs	45
Kalkulacka/Properties/ Settings.Designer.cs	45
MathTest/ BasicMathTests.cs	45
MathTest/obj/Debug/netcoreapp3.1/ MathTest.AssemblyInfo.cs	45
MathTest/obj/Release/netcoreapp3.1/ MathTest.AssemblyInfo.cs	45
MathTest/obj/x64/Release/netcoreapp3.1/ MathTest.AssemblyInfo.cs	45
Profiling/ Math.cs	44
Profiling/ Program.cs	44
Profiling/Properties/ AssemblyInfo.cs	45

Chapter 5

Namespace Documentation

5.1 Kalkulacka Namespace Reference

Namespaces

- namespace [Properties](#)

Classes

- class [ButtonEclipse](#)
- class [Form1](#)
- class [Program](#)

5.2 Kalkulacka.Properties Namespace Reference

Classes

- class **Resources**
A strongly-typed resource class, for looking up localized strings, etc.
- class **Settings**

5.3 MathComponentsNS Namespace Reference

Classes

- class [MathComponents](#)

5.4 MathTest Namespace Reference

Classes

- class [BasicMathTests](#)

5.5 Profiling Namespace Reference

Classes

- class [Program](#)

Chapter 6

Class Documentation

6.1 MathTest.BasicMathTests Class Reference

Public Member Functions

- void [TestAddition](#) ()
- void [TestSubtraction](#) ()
- void [TestMultiplication](#) ()
- void [TestDivision](#) ()
- void [TestExponentiation](#) ()
- void [TestRoot](#) ()
- void [TestLogarithm](#) ()
- void [TestSin](#) ()
- void [TestCos](#) ()
- void [TestTan](#) ()
- void [TestArcsin](#) ()
- void [TestArccos](#) ()
- void [TestArctan](#) ()
- void [TestFactorial](#) ()
- void [TestRandom](#) ()

Static Public Member Functions

- static decimal [RoundOff](#) (decimal value)

6.1.1 Member Function Documentation

6.1.1.1 RoundOff()

```
static decimal MathTest.BasicMathTests.RoundOff (  
    decimal value ) [inline], [static]
```

6.1.1.2 TestAddition()

```
void MathTest.BasicMathTests.TestAddition ( ) [inline]
```

6.1.1.3 TestArccos()

```
void MathTest.BasicMathTests.TestArccos ( ) [inline]
```

6.1.1.4 TestArcsin()

```
void MathTest.BasicMathTests.TestArcsin ( ) [inline]
```

6.1.1.5 TestArctan()

```
void MathTest.BasicMathTests.TestArctan ( ) [inline]
```

6.1.1.6 TestCos()

```
void MathTest.BasicMathTests.TestCos ( ) [inline]
```

6.1.1.7 TestDivision()

```
void MathTest.BasicMathTests.TestDivision ( ) [inline]
```

6.1.1.8 TestExponentiation()

```
void MathTest.BasicMathTests.TestExponentiation ( ) [inline]
```

6.1.1.9 TestFactorial()

```
void MathTest.BasicMathTests.TestFactorial ( ) [inline]
```

6.1.1.10 TestLogarithm()

```
void MathTest.BasicMathTests.TestLogarithm ( ) [inline]
```

6.1.1.11 TestMultiplication()

```
void MathTest.BasicMathTests.TestMultiplication ( ) [inline]
```

6.1.1.12 TestRandom()

```
void MathTest.BasicMathTests.TestRandom ( ) [inline]
```

6.1.1.13 TestRoot()

```
void MathTest.BasicMathTests.TestRoot ( ) [inline]
```

6.1.1.14 TestSin()

```
void MathTest.BasicMathTests.TestSin ( ) [inline]
```

6.1.1.15 TestSubtraction()

```
void MathTest.BasicMathTests.TestSubtraction ( ) [inline]
```

6.1.1.16 TestTan()

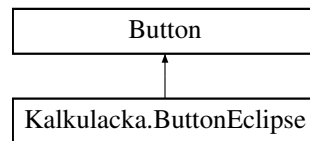
```
void MathTest.BasicMathTests.TestTan ( ) [inline]
```

The documentation for this class was generated from the following file:

- MathTest/[BasicMathTests.cs](#)

6.2 Kalkulacka.ButtonEclipse Class Reference

Inheritance diagram for Kalkulacka.ButtonEclipse:



Protected Member Functions

- override void [OnPaint](#) (PaintEventArgs e)

6.2.1 Member Function Documentation

6.2.1.1 OnPaint()

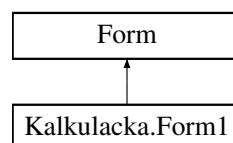
```
override void Kalkulacka.ButtonEclipse.OnPaint (
    PaintEventArgs e ) [inline], [protected]
```

The documentation for this class was generated from the following file:

- Kalkulacka/[Class1.cs](#)

6.3 Kalkulacka.Form1 Class Reference

Inheritance diagram for Kalkulacka.Form1:



Public Member Functions

- [Form1](#) ()
- void [Valid_Chk](#) ((bool, decimal) result)
Function for checking successful result.
- void [ZeroClear](#) ()
Function for clearing textbox to zero-state.
- void [Clear](#) ()
Fuction for clearing textbox to NULL-state.

Public Attributes

- [bool](#)

Function for calculating binary operations.

Protected Member Functions

- override void [Dispose](#) ([bool](#) disposing)

Clean up any resources being used.

Private Member Functions

- void [funkciaNaVyuzitie](#) ()

Function for memory.

- void [length](#) (char d)

Function chchecking length.

- void [Form1_Load](#) (object sender, EventArgs e)

Panel function for extended functions of calculator.

- void [shift_Click](#) (object sender, EventArgs e)

Function for switching panel after click on SHIFT the panel will change.

- void [off_Click](#) (object sender, EventArgs e)

Function of switching off the application.

- void [Number_click](#) (object sender, EventArgs e)

Function for clicked number chchecking length.

- void [decPoint_Click](#) (object sender, EventArgs e)

Function for Decimal point only one allowed.

- void [subtraction_Click](#) (object sender, EventArgs e)

Function for negative numbers if text box contains only zero.

- void [textBox1_KeyPress](#) (object sender, KeyPressEventArgs e)

Function to check if there is enough space in textbox for writing pressed key (WIP)

- void [operation_Click](#) (object sender, EventArgs e)

Function for setting the right operation save input erase textbox.

- void [InstantOp_Click](#) (object sender, EventArgs e)

Function for resolving buttons should work and count instantly basically unary operations and binary operations with known constant.

- decimal [Calculate](#) ()

- void [Mplus_Click](#) (object sender, EventArgs e)

Function for addition to memory Memory icon control.

- void [MRC_Click](#) (object sender, EventArgs e)

Function for recalling memory.

- void [Mminus_Click](#) (object sender, EventArgs e)

Function for subtracting from memory Memory icon control.

- void [InitializeComponent](#) ()

Required method for Designer support - do not modify the contents of this method with the code editor.

Private Attributes

- List< Panel > `listPanel` = new List<Panel>()
- `MathComponentsNS.MathComponents newMath` = new `MathComponentsNS.MathComponents()`
- `bool shiftClicked` = false
- string `operationPerformed` = ""
- decimal `firstNum` = 0
- decimal `secondNum` = 0
- decimal `MEM` = 0
- decimal `ans` = 0
- `bool erase` = false
- `bool repeatEq` = false
- System.ComponentModel.IContainer `components` = null

Required designer variable.

- System.Windows.Forms.TextBox `textBox1`
- System.Windows.Forms.Button `num1`
- System.Windows.Forms.Button `num2`
- System.Windows.Forms.Button `num3`
- System.Windows.Forms.Button `num4`
- System.Windows.Forms.Button `num5`
- System.Windows.Forms.Button `num6`
- System.Windows.Forms.Button `num7`
- System.Windows.Forms.Button `num8`
- System.Windows.Forms.Button `num9`
- System.Windows.Forms.Button `num0`
- System.Windows.Forms.Button `ANS`
- System.Windows.Forms.Button `decPoint`
- System.Windows.Forms.Button `division`
- System.Windows.Forms.Button `multiplication`
- System.Windows.Forms.Button `subtraction`
- System.Windows.Forms.Button `addition`
- System.Windows.Forms.Button `RAND`
- System.Windows.Forms.Button `equals`
- System.Windows.Forms.Button `AC`
- System.Windows.Forms.Button `del`
- System.Windows.Forms.Button `sin`
- System.Windows.Forms.Button `shift`
- System.Windows.Forms.Panel `shiftUnclickedPanel`
- System.Windows.Forms.Panel `shiftClickedPanel`
- System.Windows.Forms.Button `arcsin`
- System.Windows.Forms.Button `Power2`
- System.Windows.Forms.Button `Power3`
- System.Windows.Forms.Button `powerX`
- System.Windows.Forms.Button `log`
- System.Windows.Forms.Button `ln`
- System.Windows.Forms.Button `pi`
- System.Windows.Forms.Button `factorial`
- System.Windows.Forms.Button `root2`
- System.Windows.Forms.Button `cos`
- System.Windows.Forms.Button `arccos`
- System.Windows.Forms.Button `multiplication10`
- System.Windows.Forms.Button `PowerXMinus1`
- System.Windows.Forms.Button `root`
- System.Windows.Forms.Button `logDec`
- System.Windows.Forms.Button `root3`

- System.Windows.Forms.Button [euler](#)
- System.Windows.Forms.Button [MRC](#)
- System.Windows.Forms.Button [Mplus](#)
- System.Windows.Forms.Button [Mminus](#)
- System.Windows.Forms.Button [off](#)
- System.Windows.Forms.Button [tan](#)
- System.Windows.Forms.Button [arctan](#)
- System.Windows.Forms.Label [DisplayedM](#)

6.3.1 Constructor & Destructor Documentation

6.3.1.1 Form1()

```
Kalkulacka.Form1.Form1 ( ) [inline]
```

6.3.2 Member Function Documentation

6.3.2.1 Calculate()

```
decimal Kalkulacka.Form1.Calculate ( ) [inline], [private]
```

6.3.2.2 Clear()

```
void Kalkulacka.Form1.Clear ( ) [inline]
```

Fuction for clearing textbox to NULL-state.

6.3.2.3 decPoint_Click()

```
void Kalkulacka.Form1.decPoint_Click (
    object sender,
    EventArgs e ) [inline], [private]
```

Function for Decimal point only one allowed.

6.3.2.4 Dispose()

```
override void Kalkulacka.Form1.Dispose (
    bool disposing ) [inline], [protected]
```

Clean up any resources being used.

Parameters

<i>disposing</i>	true if managed resources should be disposed; otherwise, false.
------------------	-----------------------------------------------------------------

6.3.2.5 Form1_Load()

```
void Kalkulacka.Form1.Form1_Load (
    object sender,
    EventArgs e ) [inline], [private]
```

Panel function for extended functions of calculator.

6.3.2.6 funkcjaNaVyuzitie()

```
void Kalkulacka.Form1.funkcjaNaVyuzitie ( ) [inline], [private]
```

Function for memory.

6.3.2.7 InitializeComponent()

```
void Kalkulacka.Form1.InitializeComponent ( ) [inline], [private]
```

Required method for Designer support - do not modify the contents of this method with the code editor.

6.3.2.8 InstantOp_Click()

```
void Kalkulacka.Form1.InstantOp_Click (
    object sender,
    EventArgs e ) [inline], [private]
```

Function for resolving buttons should work and count instantly basically unary operations and binary operations with known constant.

6.3.2.9 length()

```
void Kalkulacka.Form1.length (
    char d ) [inline], [private]
```

Function chchecking length.

Parameters

in	<i>char</i>	d (clicked number or character)
----	-------------	---------------------------------

6.3.2.10 Mminus_Click()

```
void Kalkulacka.Form1.Mminus_Click (
    object sender,
    EventArgs e ) [inline], [private]
```

Function for subtracting from memory Memory icon control.

6.3.2.11 Mplus_Click()

```
void Kalkulacka.Form1.Mplus_Click (
    object sender,
    EventArgs e ) [inline], [private]
```

Function for addition to memory Memory icon control.

6.3.2.12 MRC_Click()

```
void Kalkulacka.Form1.MRC_Click (
    object sender,
    EventArgs e ) [inline], [private]
```

Function for recalling memory.

6.3.2.13 Number_click()

```
void Kalkulacka.Form1.Number_click (
    object sender,
    EventArgs e ) [inline], [private]
```

Function for clicked number chchecking length.

Returns

number in TextBox

6.3.2.14 off_Click()

```
void Kalkulacka.Form1.off_Click (
    object sender,
    EventArgs e ) [inline], [private]
```

Function of switching off the application.

Returns

close of calculator

6.3.2.15 operation_Click()

```
void Kalkulacka.Form1.operation_Click (
    object sender,
    EventArgs e ) [inline], [private]
```

Function for setting the right operation save input erase textbox.

6.3.2.16 shift_Click()

```
void Kalkulacka.Form1.shift_Click (
    object sender,
    EventArgs e ) [inline], [private]
```

Function for switching panel after click on SHIFT the panel will change.

6.3.2.17 subtraction_Click()

```
void Kalkulacka.Form1.subtraction_Click (
    object sender,
    EventArgs e ) [inline], [private]
```

Function for negative numbers if text box contains only zero.

Function for subtraction of numbers

6.3.2.18 textBox1_KeyPress()

```
void Kalkulacka.Form1.textBox1_KeyPress (
    object sender,
    KeyPressEventArgs e ) [inline], [private]
```

Function to check if there is enough space in textbox for writing pressed key (WIP)

6.3.2.19 Valid_Chk()

```
void Kalkulacka.Form1.Valid_Chk (
    (bool, decimal) result ) [inline]
```

Function for checking successful result.

Returns

result if everything is good

6.3.2.20 ZeroClear()

```
void Kalkulacka.Form1.ZeroClear ( ) [inline]
```

Function for clearing textbox to zero-state.

6.3.3 Member Data Documentation

6.3.3.1 AC

```
System.Windows.Forms.Button Kalkulacka.Form1.AC [private]
```

6.3.3.2 addition

```
System.Windows.Forms.Button Kalkulacka.Form1.addition [private]
```

6.3.3.3 ans

```
decimal Kalkulacka.Form1.ans = 0 [private]
```

6.3.3.4 ANS

```
System.Windows.Forms.Button Kalkulacka.Form1.ANS [private]
```

6.3.3.5 arccos

`System.Windows.Forms.Button Kalkulacka.Form1.arccos [private]`

6.3.3.6 arcsin

`System.Windows.Forms.Button Kalkulacka.Form1.arcsin [private]`

6.3.3.7 arctan

`System.Windows.Forms.Button Kalkulacka.Form1.arctan [private]`

6.3.3.8 bool

`Kalkulacka.Form1.bool`

Function for calculating binary operations.

6.3.3.9 components

`System.ComponentModel.IContainer Kalkulacka.Form1.components = null [private]`

Required designer variable.

6.3.3.10 cos

`System.Windows.Forms.Button Kalkulacka.Form1.cos [private]`

6.3.3.11 decPoint

`System.Windows.Forms.Button Kalkulacka.Form1.decPoint [private]`

6.3.3.12 del

```
System.Windows.Forms.Button Kalkulacka.Form1.del [private]
```

6.3.3.13 DisplayedM

```
System.Windows.Forms.Label Kalkulacka.Form1.DisplayedM [private]
```

6.3.3.14 division

```
System.Windows.Forms.Button Kalkulacka.Form1.division [private]
```

6.3.3.15 equals

```
System.Windows.Forms.Button Kalkulacka.Form1.equals [private]
```

6.3.3.16 erase

```
bool Kalkulacka.Form1.erase = false [private]
```

6.3.3.17 euler

```
System.Windows.Forms.Button Kalkulacka.Form1.euler [private]
```

6.3.3.18 factorial

```
System.Windows.Forms.Button Kalkulacka.Form1.factorial [private]
```

6.3.3.19 firstNum

```
decimal Kalkulacka.Form1.firstNum = 0 [private]
```

6.3.3.20 listPanel

```
List<Panel> Kalkulacka.Form1.listPanel = new List<Panel>() [private]
```

6.3.3.21 ln

```
System.Windows.Forms.Button Kalkulacka.Form1.ln [private]
```

6.3.3.22 log

```
System.Windows.Forms.Button Kalkulacka.Form1.log [private]
```

6.3.3.23 logDec

```
System.Windows.Forms.Button Kalkulacka.Form1.logDec [private]
```

6.3.3.24 MEM

```
decimal Kalkulacka.Form1.MEM = 0 [private]
```

6.3.3.25 Mminus

```
System.Windows.Forms.Button Kalkulacka.Form1.Mminus [private]
```

6.3.3.26 Mplus

```
System.Windows.Forms.Button Kalkulacka.Form1.Mplus [private]
```

6.3.3.27 MRC

```
System.Windows.Forms.Button Kalkulacka.Form1.MRC [private]
```


6.3.3.28 multiplication

```
System.Windows.Forms.Button Kalkulacka.Form1.multiplication [private]
```

6.3.3.29 multiplication10

```
System.Windows.Forms.Button Kalkulacka.Form1.multiplication10 [private]
```

6.3.3.30 newMath

```
MathComponentsNS.MathComponents Kalkulacka.Form1.newMath = new MathComponentsNS.MathComponents()  
[private]
```

6.3.3.31 num0

```
System.Windows.Forms.Button Kalkulacka.Form1.num0 [private]
```

6.3.3.32 num1

```
System.Windows.Forms.Button Kalkulacka.Form1.num1 [private]
```

6.3.3.33 num2

```
System.Windows.Forms.Button Kalkulacka.Form1.num2 [private]
```

6.3.3.34 num3

```
System.Windows.Forms.Button Kalkulacka.Form1.num3 [private]
```

6.3.3.35 num4

```
System.Windows.Forms.Button Kalkulacka.Form1.num4 [private]
```

6.3.3.36 num5

```
System.Windows.Forms.Button Kalkulacka.Form1.num5 [private]
```

6.3.3.37 num6

```
System.Windows.Forms.Button Kalkulacka.Form1.num6 [private]
```

6.3.3.38 num7

```
System.Windows.Forms.Button Kalkulacka.Form1.num7 [private]
```

6.3.3.39 num8

```
System.Windows.Forms.Button Kalkulacka.Form1.num8 [private]
```

6.3.3.40 num9

```
System.Windows.Forms.Button Kalkulacka.Form1.num9 [private]
```

6.3.3.41 off

```
System.Windows.Forms.Button Kalkulacka.Form1.off [private]
```

6.3.3.42 operationPerformed

```
string Kalkulacka.Form1.operationPerformed = "" [private]
```

6.3.3.43 pi

```
System.Windows.Forms.Button Kalkulacka.Form1.pi [private]
```

6.3.3.44 Power2

```
System.Windows.Forms.Button Kalkulacka.Form1.Power2 [private]
```

6.3.3.45 Power3

```
System.Windows.Forms.Button Kalkulacka.Form1.Power3 [private]
```

6.3.3.46 powerX

```
System.Windows.Forms.Button Kalkulacka.Form1.powerX [private]
```

6.3.3.47 PowerXMinus1

```
System.Windows.Forms.Button Kalkulacka.Form1.PowerXMinus1 [private]
```

6.3.3.48 RAND

```
System.Windows.Forms.Button Kalkulacka.Form1.RAND [private]
```

6.3.3.49 repeatEq

```
bool Kalkulacka.Form1.repeatEq = false [private]
```

6.3.3.50 root

```
System.Windows.Forms.Button Kalkulacka.Form1.root [private]
```

6.3.3.51 root2

```
System.Windows.Forms.Button Kalkulacka.Form1.root2 [private]
```

6.3.3.52 root3

```
System.Windows.Forms.Button Kalkulacka.Form1.root3 [private]
```

6.3.3.53 secondNum

```
decimal Kalkulacka.Form1.secondNum = 0 [private]
```

6.3.3.54 shift

```
System.Windows.Forms.Button Kalkulacka.Form1.shift [private]
```

6.3.3.55 shiftClicked

```
bool Kalkulacka.Form1.shiftClicked = false [private]
```

6.3.3.56 shiftClickedPanel

```
System.Windows.Forms.Panel Kalkulacka.Form1.shiftClickedPanel [private]
```

6.3.3.57 shiftUnclickedPanel

```
System.Windows.Forms.Panel Kalkulacka.Form1.shiftUnclickedPanel [private]
```

6.3.3.58 sin

```
System.Windows.Forms.Button Kalkulacka.Form1.sin [private]
```

6.3.3.59 subtraction

```
System.Windows.Forms.Button Kalkulacka.Form1.subtraction [private]
```

6.3.3.60 tan

```
System.Windows.Forms.Button Kalkulacka.Form1.tan [private]
```

6.3.3.61 textBox1

```
System.Windows.Forms.TextBox Kalkulacka.Form1.textBox1 [private]
```

The documentation for this class was generated from the following files:

- Kalkulacka/[Form1.cs](#)
- Kalkulacka/[Form1.Designer.cs](#)

6.4 MathComponentsNS.MathComponents Class Reference**Private Member Functions**

- decimal [TruncateToFit](#) ((bool, decimal) a)
- decimal [Add](#) (decimal a, decimal b)
- decimal [Subtract](#) (decimal a, decimal b)
- decimal [Multiply](#) (decimal a, decimal b)
- decimal [Divide](#) (decimal a, decimal b)
- decimal [Exponentiate](#) (decimal b, decimal e)
- decimal [Root](#) (decimal d, decimal r)
- decimal [Logarithm](#) (decimal a, decimal b)
- decimal [Sin](#) (decimal a)
- decimal [Cos](#) (decimal a)
- decimal [Tan](#) (decimal a)
- decimal [Arcsin](#) (decimal a)
- decimal [Arccos](#) (decimal a)
- decimal [Arctan](#) (decimal a)
- decimal [Factorial](#) (decimal a)
- decimal [UnconstrainedFactorial](#) (decimal a)
- decimal [Random](#) ()
- decimal [TruncateToFit](#) ((bool, decimal) a)
- decimal [Add](#) (decimal a, decimal b)
- decimal [Subtract](#) (decimal a, decimal b)
- decimal [Multiply](#) (decimal a, decimal b)
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- decimal [Exponentiate](#) (decimal b, decimal e)
- decimal [Root](#) (decimal d, decimal r)
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- decimal [Cos](#) (decimal a)
- decimal [Tan](#) (decimal a)
- decimal [Arcsin](#) (decimal a)
- decimal [Arccos](#) (decimal a)
- decimal [Arctan](#) (decimal a)
- decimal [Factorial](#) (decimal a)
- decimal [UnconstrainedFactorial](#) (decimal a)
- decimal [Random](#) ()

Private Attributes

- `bool`
truncates result to fit calc screen if less than 9 whole, leave all whole and truncate decimal to sum up to 9 max
- decimal `error` = (true, 0)
- decimal `constPI` = (false, (decimal)Math.PI)
- decimal `constE` = (false, (decimal)Math.E)

Static Private Attributes

- static decimal `PI` = PI
- static decimal `E` = E

6.4.1 Member Function Documentation

6.4.1.1 Add() [1/2]

```
decimal MathComponentsNS.MathComponents.Add (
    decimal a,
    decimal b ) [inline], [private]
```

6.4.1.2 Add() [2/2]

```
decimal MathComponentsNS.MathComponents.Add (
    decimal a,
    decimal b ) [inline], [private]
```

6.4.1.3 Arccos() [1/2]

```
decimal MathComponentsNS.MathComponents.Arccos (
    decimal a ) [inline], [private]
```

6.4.1.4 Arccos() [2/2]

```
decimal MathComponentsNS.MathComponents.Arccos (
    decimal a ) [inline], [private]
```

6.4.1.5 Arcsin() [1/2]

```
decimal MathComponentsNS.MathComponents.Arcsin (  
    decimal a ) [inline], [private]
```

6.4.1.6 Arcsin() [2/2]

```
decimal MathComponentsNS.MathComponents.Arcsin (  
    decimal a ) [inline], [private]
```

6.4.1.7 Arctan() [1/2]

```
decimal MathComponentsNS.MathComponents.Arctan (  
    decimal a ) [inline], [private]
```

6.4.1.8 Arctan() [2/2]

```
decimal MathComponentsNS.MathComponents.Arctan (  
    decimal a ) [inline], [private]
```

6.4.1.9 Cos() [1/2]

```
decimal MathComponentsNS.MathComponents.Cos (  
    decimal a ) [inline], [private]
```

6.4.1.10 Cos() [2/2]

```
decimal MathComponentsNS.MathComponents.Cos (  
    decimal a ) [inline], [private]
```

6.4.1.11 Divide() [1/2]

```
decimal MathComponentsNS.MathComponents.Divide (  
    decimal a,  
    decimal b ) [inline], [private]
```

6.4.1.12 Divide() [2/2]

```
decimal MathComponentsNS.MathComponents.Divide (  
    decimal a,  
    decimal b ) [inline], [private]
```

6.4.1.13 Exponentiate() [1/2]

```
decimal MathComponentsNS.MathComponents.Exponentiate (  
    decimal b,  
    decimal e ) [inline], [private]
```

6.4.1.14 Exponentiate() [2/2]

```
decimal MathComponentsNS.MathComponents.Exponentiate (  
    decimal b,  
    decimal e ) [inline], [private]
```

6.4.1.15 Factorial() [1/2]

```
decimal MathComponentsNS.MathComponents.Factorial (  
    decimal a ) [inline], [private]
```

6.4.1.16 Factorial() [2/2]

```
decimal MathComponentsNS.MathComponents.Factorial (  
    decimal a ) [inline], [private]
```

6.4.1.17 Logarithm() [1/2]

```
decimal MathComponentsNS.MathComponents.Logarithm (  
    decimal a,  
    decimal b ) [inline], [private]
```


6.4.1.18 Logarithm() [2/2]

```
decimal MathComponentsNS.MathComponents.Logarithm (  
    decimal a,  
    decimal b ) [inline], [private]
```

6.4.1.19 Multiply() [1/2]

```
decimal MathComponentsNS.MathComponents.Multiply (  
    decimal a,  
    decimal b ) [inline], [private]
```

6.4.1.20 Multiply() [2/2]

```
decimal MathComponentsNS.MathComponents.Multiply (  
    decimal a,  
    decimal b ) [inline], [private]
```

6.4.1.21 Random() [1/2]

```
decimal MathComponentsNS.MathComponents.Random ( ) [inline], [private]
```

6.4.1.22 Random() [2/2]

```
decimal MathComponentsNS.MathComponents.Random ( ) [inline], [private]
```

6.4.1.23 Root() [1/2]

```
decimal MathComponentsNS.MathComponents.Root (  
    decimal d,  
    decimal r ) [inline], [private]
```

6.4.1.24 Root() [2/2]

```
decimal MathComponentsNS.MathComponents.Root (
    decimal d,
    decimal r ) [inline], [private]
```

6.4.1.25 Sin() [1/2]

```
decimal MathComponentsNS.MathComponents.Sin (
    decimal a ) [inline], [private]
```

6.4.1.26 Sin() [2/2]

```
decimal MathComponentsNS.MathComponents.Sin (
    decimal a ) [inline], [private]
```

6.4.1.27 Subtract() [1/2]

```
decimal MathComponentsNS.MathComponents.Subtract (
    decimal a,
    decimal b ) [inline], [private]
```

6.4.1.28 Subtract() [2/2]

```
decimal MathComponentsNS.MathComponents.Subtract (
    decimal a,
    decimal b ) [inline], [private]
```

6.4.1.29 Tan() [1/2]

```
decimal MathComponentsNS.MathComponents.Tan (
    decimal a ) [inline], [private]
```

6.4.1.30 Tan() [2/2]

```
decimal MathComponentsNS.MathComponents.Tan (  
    decimal a ) [inline], [private]
```

6.4.1.31 TruncateToFit() [1/2]

```
decimal MathComponentsNS.MathComponents.TruncateToFit (  
    (bool, decimal) a ) [inline], [private]
```

6.4.1.32 TruncateToFit() [2/2]

```
decimal MathComponentsNS.MathComponents.TruncateToFit (  
    (bool, decimal) a ) [inline], [private]
```

6.4.1.33 UnconstrainedFactorial() [1/2]

```
decimal MathComponentsNS.MathComponents.UnconstrainedFactorial (  
    decimal a ) [inline], [private]
```

6.4.1.34 UnconstrainedFactorial() [2/2]

```
decimal MathComponentsNS.MathComponents.UnconstrainedFactorial (  
    decimal a ) [inline], [private]
```

6.4.2 Member Data Documentation

6.4.2.1 bool

`MathComponentsNS.MathComponents.bool` [private]

truncates result to fit calc screen if less than 9 whole, leave all whole and truncate decimal to sum up to 9 max

Function of random number generates random decimal number between 0 inclusive to 1 exclusive.

Factorial operation function without upper limit helper function, don't use in calculator.

Factorial operation function.

Function arctan.

Function arccos.

Function arcsin.

Function tangent.

Function cosine using Taylor series algorithm $\cos x = 1 - x^2/2! + x^4/4! - x^6/6! + \dots$

sine function using Taylor series algorithm $\sin x = x - x^3/3! + x^5/5! - x^7/7! + \dots$

Logarithm function expect log-argument positive expect base positive and different from 1.

Function of root to ath.

Division operation function.

Multiplication operation function.

Subtraction operation function.

Addition operation function.

Returns

error/scientific notation if more than 9 whole places (?)

Parameters

in	<i>decimal</i>	first addend (a)
in	<i>decimal</i>	second addend (b)

Returns

sum (result of $a + b$)

Parameters

in	<i>decimal</i>	minuend (a)
in	<i>decimal</i>	subtrahend (b)

Returns

difference (result of $a - b$)

Parameters

in	<i>decimal</i>	first factor (a)
in	<i>decimal</i>	second factor (b)

Returns

product (result of $a * b$)

Parameters

in	<i>decimal</i>	dividend (a)
in	<i>decimal</i>	divisor (b)

Returns

quotient (result of a / b)

error if divisor is zero

non-integer exponent or base expect error (?)

Parameters

in	<i>decimal</i>	base (b)
in	<i>decimal</i>	exponent (e)

Returns

result of b^e

error if 0^0 or 0^{-1}

Parameters

in	<i>decimal</i>	degree d
in	<i>decimal</i>	radicand r

Returns

ath root of b

error if negative radicant

Parameters

in	<i>decimal</i>	argument (a)
in	<i>decimal</i>	base (b)

Returns

log of a with base of b

Parameters

in	<i>decimal</i>	a
----	----------------	---

Returns

result with 5 decimal places precision

Parameters

in	<i>decimal</i>	number a
----	----------------	----------

Returns

result with 5 decimal places precision (?)

Parameters

in	<i>decimal</i>	number a $\tan x = \sin x / \cos x$
----	----------------	-------------------------------------

Returns

result with 5 decimal places precision (?)

Parameters

in	<i>decimal</i>	number a
----	----------------	----------

Returns

result with 5 decimal places precision (?) expect value between -pi/2 and pi/2

Parameters

in	<i>decimal</i>	number a
----	----------------	----------

Returns

result with 5 decimal places precision (?) expect value between -1 and 1

Parameters

in	<i>decimal</i>	number a expect number non-negative integer not greater than 12
----	----------------	-----------------------------------------------------------------

Returns

error if a is negative integer
error if a is greater than 12
error if a has decimal point

Parameters

in	<i>decimal</i>	number a expect number non-negative integer
----	----------------	---------------------------------------------

Returns

error if a is negative integer
error if a has decimal point

Parameters

in	<i>decimal</i>	a
in	<i>decimal</i>	b

Returns

result of $a - b$

Parameters

in	<i>decimal</i>	a
in	<i>decimal</i>	b

Returns

result of $a * b$

Parameters

in	<i>decimal</i>	a
in	<i>decimal</i>	b

Returns

result of a / b
error if division by zero

i non-integer exponent or base expect error (?)

Parameters

in	<i>decimal</i>	a
in	<i>decimal</i>	b

Returns

result of a^b

error if 0^0

Parameters

in	<i>decimal</i>	d
in	<i>decimal</i>	radicant r

Returns

ath root of b

error if negative radicant

Parameters

in	<i>decimal</i>	a
in	<i>decimal</i>	b

Returns

log of a with base of b

Parameters

in	<i>decimal</i>	a
----	----------------	---

Returns

result with 5 decimal places precision (?)

Parameters

in	<i>decimal</i>	$a \tan x = \sin x / \cos x$
----	----------------	------------------------------

Returns

result with 5 decimal places precision (?)

Parameters

in	<i>decimal</i>	a
----	----------------	---

Returns

result with 5 decimal places precision (?) expect value between $-\pi/2$ and $\pi/2$

Parameters

in	<i>decimal</i>	a
----	----------------	---

Returns

result with 5 decimal places precision (?) expect value between -1 and 1

Parameters

in	<i>decimal</i>	a expect number non-negative integer not greater than 12
----	----------------	----------------------------------------------------------

Returns

error if a is negative integer

error if a is greater than 12

error if a has decimal point

Parameters

in	<i>decimal</i>	a expect number non-negative integer
----	----------------	--------------------------------------

Returns

error if a is negative integer

error if a has decimal point

result with 5 decimal places precision (?)

6.4.2.2 constE

```
decimal MathComponentsNS.MathComponents.constE = (false, (decimal)Math.E) [private]
```

6.4.2.3 constPI

```
decimal MathComponentsNS.MathComponents.constPI = (false, (decimal)Math.PI) [private]
```

6.4.2.4 E

```
decimal MathComponentsNS.MathComponents.E = E [static], [private]
```

6.4.2.5 error

```
decimal MathComponentsNS.MathComponents.error = (true, 0) [private]
```

6.4.2.6 PI

```
decimal MathComponentsNS.MathComponents.PI = PI [static], [private]
```

The documentation for this class was generated from the following file:

- Kalkulacka/[Math.cs](#)

6.5 Kalkulacka.Program Class Reference

Static Private Member Functions

- static void [Main](#) ()
The main entry point for the application.

6.5.1 Member Function Documentation

6.5.1.1 Main()

```
static void Kalkulacka.Program.Main ( ) [inline], [static], [private]
```

The main entry point for the application.

The documentation for this class was generated from the following file:

- Kalkulacka/[Program.cs](#)

6.6 Profiling.Program Class Reference

Static Private Member Functions

- static int [Main](#) (string[] args)

6.6.1 Member Function Documentation

6.6.1.1 Main()

```
static int Profiling.Program.Main (  
    string[] args ) [inline], [static], [private]
```

The documentation for this class was generated from the following file:

- Profiling/[Program.cs](#)

Chapter 7

File Documentation

7.1 Kalkulacka/Class1.cs File Reference

Classes

- class [Kalkulacka.ButtonEclipse](#)

Namespaces

- namespace [Kalkulacka](#)

7.2 Kalkulacka/Form1.cs File Reference

Classes

- class [Kalkulacka.Form1](#)

Namespaces

- namespace [Kalkulacka](#)

7.3 Kalkulacka/Form1.Designer.cs File Reference

Classes

- class [Kalkulacka.Form1](#)

Namespaces

- namespace [Kalkulacka](#)

7.4 Kalkulacka/Math.cs File Reference

Classes

- class [MathComponentsNS.MathComponents](#)

Namespaces

- namespace [MathComponentsNS](#)

7.5 Profiling/Math.cs File Reference

Classes

- class [MathComponentsNS.MathComponents](#)

Namespaces

- namespace [MathComponentsNS](#)

7.6 Kalkulacka/Program.cs File Reference

Classes

- class [Kalkulacka.Program](#)

Namespaces

- namespace [Kalkulacka](#)

7.7 Profiling/Program.cs File Reference

Classes

- class [Profiling.Program](#)

Namespaces

- namespace [Profiling](#)

7.8 Kalkulacka/Properties/AssemblyInfo.cs File Reference

7.9 Profiling/Properties/AssemblyInfo.cs File Reference

7.10 Kalkulacka/Properties/Resources.Designer.cs File Reference

Classes

- class **Kalkulacka.Properties.Resources**
A strongly-typed resource class, for looking up localized strings, etc.

Namespaces

- namespace [Kalkulacka](#)
- namespace [Kalkulacka.Properties](#)

7.11 Kalkulacka/Properties/Settings.Designer.cs File Reference

Classes

- class **Kalkulacka.Properties.Settings**

Namespaces

- namespace [Kalkulacka](#)
- namespace [Kalkulacka.Properties](#)

7.12 MathTest/BasicMathTests.cs File Reference

Classes

- class [MathTest.BasicMathTests](#)

Namespaces

- namespace [MathTest](#)

7.13 MathTest/obj/Debug/netcoreapp3.1/MathTest.AssemblyInfo.cs File Reference

7.14 MathTest/obj/Release/netcoreapp3.1/MathTest.AssemblyInfo.cs File Reference

7.15 MathTest/obj/x64/Release/netcoreapp3.1/MathTest.AssemblyInfo.cs File Reference

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