Solve.NET Math Expression Parser  
Solve.NET Namespace

[Namespaces](#chmtopic1) > Solve.NET

Contains classes parse and evaluate a math expression.

 Syntax

**namespace** Solve.NET

 Types

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| All Types | Classes | Structures | Interfaces | Enumerations | Delegates |

|  |  |  |
| --- | --- | --- |
| **Icon** | **Name** | **Description** |
| public class | [ConvertExpression](#chmtopic3) | A class representing unit convertion expressions. |
| public class | [ExpressionBase](#chmtopic10) | The base class for expressions |
| public class | [FunctionExpression](#chmtopic15) | A class representing the System.Math function expressions |
| public interface | [IExpression](#chmtopic23) | The interface used when running expressions |
| public delegate | [MathEvaluate](#chmtopic26) | Delegate used by an expression to do the math evaluation. |
| public class | [MathEvaluator](#chmtopic27) | Evaluate math expressions |
| public enumeration | [MathOperators](#chmtopic38) | Math Operators |
| public class | [NumberExpression](#chmtopic39) | Class representing a constant number expression. |
| public class | [OperatorExpression](#chmtopic46) | Class representing a math operator expression. |
| public class | [ParseException](#chmtopic60) | The exception that is thrown when there is an error parsing a math expression. |
| public class | [VariableDictionary](#chmtopic66) | Class representing a collection of variable names and values. |

Solve.NET Math Expression Parser  
ConvertExpression Class

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > ConvertExpression

A class representing unit convertion expressions.

 Syntax

**public** **class** ConvertExpression : [ExpressionBase](#chmtopic10)

 Members

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| All Members | Constructors | Methods | Properties | Fields | Events |
| Public Protected | | Instance Static | | Declared Inherited | |

|  |  |  |
| --- | --- | --- |
| **Icon** | **Member** | **Description** |
|  | [**ConvertExpressionNew**(String)](#chmtopic4) | Initializes a new instance of the ConvertExpression class. |
|  | [ArgumentCount](#chmtopic5) | Gets the number of arguments this expression uses.  (Overrides [ExpressionBase](#chmtopic10).[ArgumentCount](#chmtopic12).) |
|  | [Convert(Double**[]()**)](#chmtopic6) | Convert the numbers to the new unit. |
|  | [Equals(Object)](http://msdn2.microsoft.com/en-us/bsc2ak47) | Determines whether the specified [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) is equal to the current [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [Evaluate](#chmtopic13) | Gets or sets the evaluate delegate.  (Inherited from [ExpressionBase](#chmtopic10).) |
| static member | [ExpressionFormat](#chmtopic7) | The format of a convertion expression. |
|  | [Finalize()](http://msdn2.microsoft.com/en-us/4k87zsw7) | Allows an [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) to attempt to free resources and perform other cleanup operations before the [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) is reclaimed by garbage collection.  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [GetHashCode()](http://msdn2.microsoft.com/en-us/zdee4b3y) | Serves as a hash function for a particular type. [GetHashCode()](http://msdn2.microsoft.com/en-us/zdee4b3y) is suitable for use in hashing algorithms and data structures like a hash table.  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [GetType()](http://msdn2.microsoft.com/en-us/dfwy45w9) | Gets the [Type](http://msdn2.microsoft.com/en-us/42892f65) of the current instance.  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
| static member | [IsConvertExpression(String)](#chmtopic8) | Determines whether the specified expression name is for unit convertion. |
|  | [MemberwiseClone()](http://msdn2.microsoft.com/en-us/57ctke0a) | Creates a shallow copy of the current [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [ToString()](#chmtopic9) | Returns a [String](http://msdn2.microsoft.com/en-us/s1wwdcbf) that represents the current [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).  (Overrides [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).[ToString()](http://msdn2.microsoft.com/en-us/7bxwbwt2).) |
|  | [Validate(Double**[]()**)](#chmtopic14) | Validates the specified numbers for the expression.  (Inherited from [ExpressionBase](#chmtopic10).) |

 Inheritance Hierarchy

|  |  |  |
| --- | --- | --- |
| [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) | | |
|  | [ExpressionBase](#chmtopic10) | |
|  |  | ConvertExpression |

Solve.NET Math Expression Parser  
ConvertExpression Constructor (expression)

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [ConvertExpression](#chmtopic3) > **ConvertExpressionNew**(String)

Initializes a new instance of the [ConvertExpression](#chmtopic3) class.

 Syntax

**public** ConvertExpression (

[string](http://msdn2.microsoft.com/en-us/s1wwdcbf) expression

)

 Parameters

expression ([String](http://msdn2.microsoft.com/en-us/s1wwdcbf))

The convertion expression for this instance.

Solve.NET Math Expression Parser  
ArgumentCount Property

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [ConvertExpression](#chmtopic3) > ArgumentCount

Gets the number of arguments this expression uses.

 Syntax

**public** **override** [int](http://msdn2.microsoft.com/en-us/td2s409d) ArgumentCount { get; }

 Field Value

The argument count.

Solve.NET Math Expression Parser  
Convert Method (numbers)

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [ConvertExpression](#chmtopic3) > Convert(Double**[]()**)

Convert the numbers to the new unit.

 Syntax

**public** [double](http://msdn2.microsoft.com/en-us/643eft0t) Convert (

[double](http://msdn2.microsoft.com/en-us/643eft0t)[] numbers

)

 Parameters

numbers ([Double](http://msdn2.microsoft.com/en-us/643eft0t)[]())

The numbers used in the convertion.

 Return Value

The result of the convertion execution.

 Exceptions

|  |  |
| --- | --- |
| **Exception** | **Condition** |
| [ArgumentNullException](http://msdn2.microsoft.com/en-us/27426hcy) | When numbers is null. |
| [ArgumentException](http://msdn2.microsoft.com/en-us/3w1b3114) | When the length of numbers do not equal [ArgumentCount](#chmtopic5). |

Solve.NET Math Expression Parser  
ExpressionFormat Field

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [ConvertExpression](#chmtopic3) > ExpressionFormat

The format of a convertion expression.

 Syntax

**public** **const** [string](http://msdn2.microsoft.com/en-us/s1wwdcbf) ExpressionFormat

Solve.NET Math Expression Parser  
IsConvertExpression Method (expression)

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [ConvertExpression](#chmtopic3) > IsConvertExpression(String)

Determines whether the specified expression name is for unit convertion.

 Syntax

**public** **static** [bool](http://msdn2.microsoft.com/en-us/a28wyd50) IsConvertExpression (

[string](http://msdn2.microsoft.com/en-us/s1wwdcbf) expression

)

 Parameters

expression ([String](http://msdn2.microsoft.com/en-us/s1wwdcbf))

The expression to check.

 Return Value

true if the specified expression is a unit convertion; otherwise, false.

Solve.NET Math Expression Parser  
ToString Method

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [ConvertExpression](#chmtopic3) > ToString()

Returns a [String](http://msdn2.microsoft.com/en-us/s1wwdcbf) that represents the current [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).

 Syntax

**public** **override** [string](http://msdn2.microsoft.com/en-us/s1wwdcbf) ToString ()

 Return Value

Solve.NET Math Expression Parser  
ExpressionBase Class

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > ExpressionBase

The base class for expressions

 Syntax

**public** **abstract** **class** ExpressionBase : [IExpression](#chmtopic23)

 Members

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| All Members | Constructors | Methods | Properties | Fields | Events |
| Public Protected | | Instance Static | | Declared Inherited | |

|  |  |  |
| --- | --- | --- |
| **Icon** | **Member** | **Description** |
|  | [**ExpressionBaseNew**()](#chmtopic11) |  |
|  | [ArgumentCount](#chmtopic12) | Gets the number of arguments this expression uses. |
|  | [Equals(Object)](http://msdn2.microsoft.com/en-us/bsc2ak47) | Determines whether the specified [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) is equal to the current [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [Evaluate](#chmtopic13) | Gets or sets the evaluate delegate. |
|  | [Finalize()](http://msdn2.microsoft.com/en-us/4k87zsw7) | Allows an [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) to attempt to free resources and perform other cleanup operations before the [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) is reclaimed by garbage collection.  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [GetHashCode()](http://msdn2.microsoft.com/en-us/zdee4b3y) | Serves as a hash function for a particular type. [GetHashCode()](http://msdn2.microsoft.com/en-us/zdee4b3y) is suitable for use in hashing algorithms and data structures like a hash table.  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [GetType()](http://msdn2.microsoft.com/en-us/dfwy45w9) | Gets the [Type](http://msdn2.microsoft.com/en-us/42892f65) of the current instance.  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [MemberwiseClone()](http://msdn2.microsoft.com/en-us/57ctke0a) | Creates a shallow copy of the current [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [ToString()](http://msdn2.microsoft.com/en-us/7bxwbwt2) | Returns a [String](http://msdn2.microsoft.com/en-us/s1wwdcbf) that represents the current [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [Validate(Double**[]()**)](#chmtopic14) | Validates the specified numbers for the expression. |

 Inheritance Hierarchy

|  |  |  |
| --- | --- | --- |
| [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) | | |
|  | ExpressionBase | |
|  |  | [ConvertExpression](#chmtopic3) |
|  |  | [OperatorExpression](#chmtopic46) |
|  |  | [NumberExpression](#chmtopic39) |
|  |  | [FunctionExpression](#chmtopic15) |

Solve.NET Math Expression Parser  
ExpressionBase Constructor

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [ExpressionBase](#chmtopic10) > **ExpressionBaseNew**()

Initializes a new instance of the [ExpressionBase](#chmtopic11) class.

 Syntax

**protected** ExpressionBase ()

Solve.NET Math Expression Parser  
ArgumentCount Property

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [ExpressionBase](#chmtopic10) > ArgumentCount

Gets the number of arguments this expression uses.

 Syntax

**public** **abstract** [int](http://msdn2.microsoft.com/en-us/td2s409d) ArgumentCount { get; }

 Field Value

The argument count.

Solve.NET Math Expression Parser  
Evaluate Property

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [ExpressionBase](#chmtopic10) > Evaluate

Gets or sets the evaluate delegate.

 Syntax

**public** **virtual** [MathEvaluate](#chmtopic26) Evaluate { get; set; }

 Field Value

The evaluate delegate.

Solve.NET Math Expression Parser  
Validate Method (numbers)

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [ExpressionBase](#chmtopic10) > Validate(Double**[]()**)

Validates the specified numbers for the expression.

 Syntax

**protected** **void** Validate (

[double](http://msdn2.microsoft.com/en-us/643eft0t)[] numbers

)

 Parameters

numbers ([Double](http://msdn2.microsoft.com/en-us/643eft0t)[]())

The numbers to validate.

 Exceptions

|  |  |
| --- | --- |
| **Exception** | **Condition** |
| [ArgumentNullException](http://msdn2.microsoft.com/en-us/27426hcy) | When numbers is null. |
| [ArgumentException](http://msdn2.microsoft.com/en-us/3w1b3114) | When the length of numbers do not equal [ArgumentCount](#chmtopic12). |

Solve.NET Math Expression Parser  
FunctionExpression Class

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > FunctionExpression

A class representing the System.Math function expressions

 Syntax

**public** **class** FunctionExpression : [ExpressionBase](#chmtopic10)

 Members

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| All Members | Constructors | Methods | Properties | Fields | Events |
| Public Protected | | Instance Static | | Declared Inherited | |

|  |  |  |
| --- | --- | --- |
| **Icon** | **Member** | **Description** |
|  | [**FunctionExpressionNew**(String)](#chmtopic16) | Initializes a new instance of the FunctionExpression class. |
|  | [ArgumentCount](#chmtopic17) | Gets the number of arguments this expression uses.  (Overrides [ExpressionBase](#chmtopic10).[ArgumentCount](#chmtopic12).) |
|  | [Equals(Object)](http://msdn2.microsoft.com/en-us/bsc2ak47) | Determines whether the specified [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) is equal to the current [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [Evaluate](#chmtopic13) | Gets or sets the evaluate delegate.  (Inherited from [ExpressionBase](#chmtopic10).) |
|  | [Execute(Double**[]()**)](#chmtopic18) | Executes the function on specified numbers. |
|  | [Finalize()](http://msdn2.microsoft.com/en-us/4k87zsw7) | Allows an [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) to attempt to free resources and perform other cleanup operations before the [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) is reclaimed by garbage collection.  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [Function](#chmtopic19) | Gets the name function for this instance. |
| static member | [GetFunctionNames()](#chmtopic20) | Gets the function names. |
|  | [GetHashCode()](http://msdn2.microsoft.com/en-us/zdee4b3y) | Serves as a hash function for a particular type. [GetHashCode()](http://msdn2.microsoft.com/en-us/zdee4b3y) is suitable for use in hashing algorithms and data structures like a hash table.  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [GetType()](http://msdn2.microsoft.com/en-us/dfwy45w9) | Gets the [Type](http://msdn2.microsoft.com/en-us/42892f65) of the current instance.  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
| static member | [IsFunction(String)](#chmtopic21) | Determines whether the specified function name is a function. |
|  | [MemberwiseClone()](http://msdn2.microsoft.com/en-us/57ctke0a) | Creates a shallow copy of the current [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [ToString()](#chmtopic22) | Returns a [String](http://msdn2.microsoft.com/en-us/s1wwdcbf) that represents the current [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).  (Overrides [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).[ToString()](http://msdn2.microsoft.com/en-us/7bxwbwt2).) |
|  | [Validate(Double**[]()**)](#chmtopic14) | Validates the specified numbers for the expression.  (Inherited from [ExpressionBase](#chmtopic10).) |

 Inheritance Hierarchy

|  |  |  |
| --- | --- | --- |
| [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) | | |
|  | [ExpressionBase](#chmtopic10) | |
|  |  | FunctionExpression |

Solve.NET Math Expression Parser  
FunctionExpression Constructor (function)

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [FunctionExpression](#chmtopic15) > **FunctionExpressionNew**(String)

Initializes a new instance of the [FunctionExpression](#chmtopic15) class.

 Syntax

**public** FunctionExpression (

[string](http://msdn2.microsoft.com/en-us/s1wwdcbf) function

)

 Parameters

function ([String](http://msdn2.microsoft.com/en-us/s1wwdcbf))

The function name for this instance.

Solve.NET Math Expression Parser  
ArgumentCount Property

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [FunctionExpression](#chmtopic15) > ArgumentCount

Gets the number of arguments this expression uses.

 Syntax

**public** **override** [int](http://msdn2.microsoft.com/en-us/td2s409d) ArgumentCount { get; }

 Field Value

The argument count.

Solve.NET Math Expression Parser  
Execute Method (numbers)

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [FunctionExpression](#chmtopic15) > Execute(Double**[]()**)

Executes the function on specified numbers.

 Syntax

**public** [double](http://msdn2.microsoft.com/en-us/643eft0t) Execute (

[double](http://msdn2.microsoft.com/en-us/643eft0t)[] numbers

)

 Parameters

numbers ([Double](http://msdn2.microsoft.com/en-us/643eft0t)[]())

The numbers used in the function.

 Return Value

The result of the function execution.

 Exceptions

|  |  |
| --- | --- |
| **Exception** | **Condition** |
| [ArgumentNullException](http://msdn2.microsoft.com/en-us/27426hcy) | When numbers is null. |
| [ArgumentException](http://msdn2.microsoft.com/en-us/3w1b3114) | When the length of numbers do not equal [ArgumentCount](#chmtopic17). |

Solve.NET Math Expression Parser  
Function Property

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [FunctionExpression](#chmtopic15) > Function

Gets the name function for this instance.

 Syntax

**public** [string](http://msdn2.microsoft.com/en-us/s1wwdcbf) Function { get; }

 Field Value

The function name.

Solve.NET Math Expression Parser  
GetFunctionNames Method

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [FunctionExpression](#chmtopic15) > GetFunctionNames()

Gets the function names.

 Syntax

**public** **static** [string](http://msdn2.microsoft.com/en-us/s1wwdcbf)[] GetFunctionNames ()

 Return Value

An array of function names.

Solve.NET Math Expression Parser  
IsFunction Method (function)

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [FunctionExpression](#chmtopic15) > IsFunction(String)

Determines whether the specified function name is a function.

 Syntax

**public** **static** [bool](http://msdn2.microsoft.com/en-us/a28wyd50) IsFunction (

[string](http://msdn2.microsoft.com/en-us/s1wwdcbf) function

)

 Parameters

function ([String](http://msdn2.microsoft.com/en-us/s1wwdcbf))

The function name.

 Return Value

true if the specified name is a function; otherwise, false.

Solve.NET Math Expression Parser  
ToString Method

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [FunctionExpression](#chmtopic15) > ToString()

Returns a [String](http://msdn2.microsoft.com/en-us/s1wwdcbf) that represents the current [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).

 Syntax

**public** **override** [string](http://msdn2.microsoft.com/en-us/s1wwdcbf) ToString ()

 Return Value

A [String](http://msdn2.microsoft.com/en-us/s1wwdcbf) that represents the current [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).

Solve.NET Math Expression Parser  
IExpression Interface

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > IExpression

The interface used when running expressions

 Syntax

**public** **interface** IExpression

 Members

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| All Members | Constructors | Methods | Properties | Fields | Events |
| Public Protected | | Instance Static | | Declared Inherited | |

|  |  |  |
| --- | --- | --- |
| **Icon** | **Member** | **Description** |
|  | [ArgumentCount](#chmtopic24) | Gets the number of arguments this expression uses. |
|  | [Evaluate](#chmtopic25) | Gets or sets the evaluate delegate. |

Solve.NET Math Expression Parser  
ArgumentCount Property

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [IExpression](#chmtopic23) > ArgumentCount

Gets the number of arguments this expression uses.

 Syntax

[int](http://msdn2.microsoft.com/en-us/td2s409d) ArgumentCount { get; }

 Field Value

The argument count

Solve.NET Math Expression Parser  
Evaluate Property

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [IExpression](#chmtopic23) > Evaluate

Gets or sets the evaluate delegate.

 Syntax

[MathEvaluate](#chmtopic26) Evaluate { get; set; }

 Field Value

The evaluate delegate.

Solve.NET Math Expression Parser  
MathEvaluate Delegate

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > MathEvaluate

Delegate used by an expression to do the math evaluation.

 Syntax

**public** **delegate** [double](http://msdn2.microsoft.com/en-us/643eft0t) MathEvaluate (

[double](http://msdn2.microsoft.com/en-us/643eft0t)[] numbers

)

 Parameters

numbers ([Double](http://msdn2.microsoft.com/en-us/643eft0t)[]())

The numbers to evaluate.

 Return Value

The result of the evaluated numbers.

Solve.NET Math Expression Parser  
MathEvaluator Class

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > MathEvaluator

Evaluate math expressions

 Syntax

**public** **class** MathEvaluator : [IDisposable](http://msdn2.microsoft.com/en-us/aax125c9)

 Members

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| All Members | Constructors | Methods | Properties | Fields | Events |
| Public Protected | | Instance Static | | Declared Inherited | |

|  |  |  |
| --- | --- | --- |
| **Icon** | **Member** | **Description** |
|  | [**MathEvaluatorNew**()](#chmtopic28) | Initializes a new instance of the MathEvaluator class. |
|  | [Answer](#chmtopic29) | Gets the answer from the last evaluation. |
| static member | [AnswerVariable](#chmtopic30) | The name of the answer variable. |
|  | [Dispose()](#chmtopic32) | Releases unmanaged and - optionally - managed resources |
|  | [Dispose(Boolean)](#chmtopic33) | Releases unmanaged and managed resources |
|  | [Equals(Object)](http://msdn2.microsoft.com/en-us/bsc2ak47) | Determines whether the specified [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) is equal to the current [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [Evaluate(String)](#chmtopic34) | Evaluates the specified expression. |
|  | [Finalize()](http://msdn2.microsoft.com/en-us/4k87zsw7) | Allows an [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) to attempt to free resources and perform other cleanup operations before the [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) is reclaimed by garbage collection.  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [Functions](#chmtopic35) | Gets the functions available to MathEvaluator. |
|  | [GetHashCode()](http://msdn2.microsoft.com/en-us/zdee4b3y) | Serves as a hash function for a particular type. [GetHashCode()](http://msdn2.microsoft.com/en-us/zdee4b3y) is suitable for use in hashing algorithms and data structures like a hash table.  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [GetType()](http://msdn2.microsoft.com/en-us/dfwy45w9) | Gets the [Type](http://msdn2.microsoft.com/en-us/42892f65) of the current instance.  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [MemberwiseClone()](http://msdn2.microsoft.com/en-us/57ctke0a) | Creates a shallow copy of the current [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [RegisterFunction(String, IExpression)](#chmtopic36) | Registers a function for the MathEvaluator. |
|  | [ToString()](http://msdn2.microsoft.com/en-us/7bxwbwt2) | Returns a [String](http://msdn2.microsoft.com/en-us/s1wwdcbf) that represents the current [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [Variables](#chmtopic37) | Gets the variables collections. |

 Examples

Using the MathEvaluator to calculate a math expression.

 CopyC#

MathEvaluator eval = new MathEvaluator();

//basic math

double result = eval.Evaluate("(2 + 1) \* (1 + 2)");

//calling a function

result = eval.Evaluate("sqrt(4)");

//evaluate trigonometric

result = eval.Evaluate("cos(pi \* 45 / 180.0)");

//convert inches to feet

result = eval.Evaluate("12 [in->ft]");

//use variable

result = eval.Evaluate("answer \* 10");

 Inheritance Hierarchy

|  |  |
| --- | --- |
| [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) | |
|  | MathEvaluator |

Solve.NET Math Expression Parser  
MathEvaluator Constructor

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [MathEvaluator](#chmtopic27) > **MathEvaluatorNew**()

Initializes a new instance of the [MathEvaluator](#chmtopic27) class.

 Syntax

**public** MathEvaluator ()

Solve.NET Math Expression Parser  
Answer Property

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [MathEvaluator](#chmtopic27) > Answer

Gets the answer from the last evaluation.

 Syntax

**public** [double](http://msdn2.microsoft.com/en-us/643eft0t) Answer { get; }

 Field Value

The answer variable value.

 See Also

[Variables](#chmtopic37)

Solve.NET Math Expression Parser  
AnswerVariable Field

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [MathEvaluator](#chmtopic27) > AnswerVariable

The name of the answer variable.

 Syntax

**public** **const** [string](http://msdn2.microsoft.com/en-us/s1wwdcbf) AnswerVariabl

 See Also

[Variables](#chmtopic37)

Solve.NET Math Expression Parser  
Dispose Method

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [MathEvaluator](#chmtopic27) > Dispose

 Members

|  |  |  |
| --- | --- | --- |
| **Icon** | **Member** | **Description** |
|  | [Dispose()](#chmtopic32) | Releases unmanaged and - optionally - managed resources |
|  | [Dispose(Boolean)](#chmtopic33) | Releases unmanaged and managed resources |

Solve.NET Math Expression Parser  
Dispose Method

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [MathEvaluator](#chmtopic27) > Dispose()

Releases unmanaged and - optionally - managed resources

 Syntax

**public** **void** Dispose ()

Solve.NET Math Expression Parser  
Dispose Method (disposing)

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [MathEvaluator](#chmtopic27) > Dispose(Boolean)

Releases unmanaged and managed resources

 Syntax

**protected** **virtual** **void** Dispose (

[bool](http://msdn2.microsoft.com/en-us/a28wyd50) disposing

)

 Parameters

disposing ([Boolean](http://msdn2.microsoft.com/en-us/a28wyd50))

true to release both managed and unmanaged resources; false to release only unmanaged resources.

Solve.NET Math Expression Parser  
Evaluate Method (expression)

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [MathEvaluator](#chmtopic27) > Evaluate(String)

Evaluates the specified expression.

 Syntax

**public** [double](http://msdn2.microsoft.com/en-us/643eft0t) Evaluate (

[string](http://msdn2.microsoft.com/en-us/s1wwdcbf) expression

)

 Parameters

expression ([String](http://msdn2.microsoft.com/en-us/s1wwdcbf))

The expression to evaluate.

 Return Value

The result of the evaluated expression.

 Exceptions

|  |  |
| --- | --- |
| **Exception** | **Condition** |
| [ArgumentNullException](http://msdn2.microsoft.com/en-us/27426hcy) | When expression is null or empty. |
| [ParseException](#chmtopic60) | When there is an error parsing the expression. |

Solve.NET Math Expression Parser  
Functions Property

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [MathEvaluator](#chmtopic27) > Functions

Gets the functions available to [MathEvaluator](#chmtopic27).

 Syntax

**public** [ReadOnlyCollection](http://msdn2.microsoft.com/en-us/ms132474)<[string](http://msdn2.microsoft.com/en-us/s1wwdcbf)> Functions { get; }

 Field Value

The functions for [MathEvaluator](#chmtopic27).

 See Also

[RegisterFunction(String, IExpression)](#chmtopic36)

Solve.NET Math Expression Parser  
RegisterFunction Method (functionName, expression)

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [MathEvaluator](#chmtopic27) > RegisterFunction(String, IExpression)

Registers a function for the [MathEvaluator](#chmtopic27).

 Syntax

**public** **void** RegisterFunction (

[string](http://msdn2.microsoft.com/en-us/s1wwdcbf) functionName,

[IExpression](#chmtopic23) expression

)

 Parameters

functionName ([String](http://msdn2.microsoft.com/en-us/s1wwdcbf))

Name of the function.

expression ([IExpression](#chmtopic23))

An instance of [IExpression](#chmtopic23) for the function.

 Exceptions

|  |  |
| --- | --- |
| **Exception** | **Condition** |
| [ArgumentNullException](http://msdn2.microsoft.com/en-us/27426hcy) | When functionName or expression are null. |
| [ArgumentException](http://msdn2.microsoft.com/en-us/3w1b3114) | When IExpression.Evaluate property is null or the functionName is already registered. |

 See Also

[Functions](#chmtopic35)  
[IExpression](#chmtopic23)

Solve.NET Math Expression Parser  
Variables Property

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [MathEvaluator](#chmtopic27) > Variables

Gets the variables collections.

 Syntax

**public** [VariableDictionary](#chmtopic66) Variables { get; }

 Field Value

The variables for [MathEvaluator](#chmtopic27).

Solve.NET Math Expression Parser  
MathOperators Enumeration

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > MathOperators

Math Operators

 Syntax

**public** **enum** MathOperators

 Members

|  |  |
| --- | --- |
| **Member** | **Description** |
| Add | Add Operator |
| Subtract | Subtract Operator |
| Multiple | Multiple Operator |
| Divide | Divide Operator |
| Modulo | Modulo Operator |
| Power | Power Operator |

Solve.NET Math Expression Parser  
NumberExpression Class

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > NumberExpression

Class representing a constant number expression.

 Syntax

**public** **class** NumberExpression : [ExpressionBase](#chmtopic10)

 Members

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| All Members | Constructors | Methods | Properties | Fields | Events |
| Public Protected | | Instance Static | | Declared Inherited | |

|  |  |  |
| --- | --- | --- |
| **Icon** | **Member** | **Description** |
|  | [**NumberExpressionNew**(Double)](#chmtopic40) | Initializes a new instance of the NumberExpression class. |
|  | [ArgumentCount](#chmtopic41) | Gets the number of arguments this expression uses.  (Overrides [ExpressionBase](#chmtopic10).[ArgumentCount](#chmtopic12).) |
|  | [Equals(Object)](http://msdn2.microsoft.com/en-us/bsc2ak47) | Determines whether the specified [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) is equal to the current [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [Evaluate](#chmtopic13) | Gets or sets the evaluate delegate.  (Inherited from [ExpressionBase](#chmtopic10).) |
|  | [Finalize()](http://msdn2.microsoft.com/en-us/4k87zsw7) | Allows an [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) to attempt to free resources and perform other cleanup operations before the [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) is reclaimed by garbage collection.  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [GetHashCode()](http://msdn2.microsoft.com/en-us/zdee4b3y) | Serves as a hash function for a particular type. [GetHashCode()](http://msdn2.microsoft.com/en-us/zdee4b3y) is suitable for use in hashing algorithms and data structures like a hash table.  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [GetType()](http://msdn2.microsoft.com/en-us/dfwy45w9) | Gets the [Type](http://msdn2.microsoft.com/en-us/42892f65) of the current instance.  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
| static member | [IsNegativeSign(Char)](#chmtopic42) | Determines whether the specified char is negative sign. |
| static member | [IsNumber(Char)](#chmtopic43) | Determines whether the specified char is a number. |
|  | [MemberwiseClone()](http://msdn2.microsoft.com/en-us/57ctke0a) | Creates a shallow copy of the current [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [ToString()](#chmtopic44) | Returns a [String](http://msdn2.microsoft.com/en-us/s1wwdcbf) that represents the current [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).  (Overrides [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).[ToString()](http://msdn2.microsoft.com/en-us/7bxwbwt2).) |
|  | [Validate(Double**[]()**)](#chmtopic14) | Validates the specified numbers for the expression.  (Inherited from [ExpressionBase](#chmtopic10).) |
|  | [Value](#chmtopic45) | Gets the number value for this expression. |

 Inheritance Hierarchy

|  |  |  |
| --- | --- | --- |
| [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) | | |
|  | [ExpressionBase](#chmtopic10) | |
|  |  | NumberExpression |

Solve.NET Math Expression Parser  
NumberExpression Constructor (value)

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [NumberExpression](#chmtopic39) > **NumberExpressionNew**(Double)

Initializes a new instance of the [NumberExpression](#chmtopic39) class.

 Syntax

**public** NumberExpression (

[double](http://msdn2.microsoft.com/en-us/643eft0t) value

)

 Parameters

value ([Double](http://msdn2.microsoft.com/en-us/643eft0t))

The number value for this expression.

Solve.NET Math Expression Parser  
ArgumentCount Property

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [NumberExpression](#chmtopic39) > ArgumentCount

Gets the number of arguments this expression uses.

 Syntax

**public** **override** [int](http://msdn2.microsoft.com/en-us/td2s409d) ArgumentCount { get; }

 Field Value

The argument count.

Solve.NET Math Expression Parser  
IsNegativeSign Method (c)

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [NumberExpression](#chmtopic39) > IsNegativeSign(Char)

Determines whether the specified char is negative sign.

 Syntax

**public** **static** [bool](http://msdn2.microsoft.com/en-us/a28wyd50) IsNegativeSign (

[char](http://msdn2.microsoft.com/en-us/k493b04s) c

)

 Parameters

c ([Char](http://msdn2.microsoft.com/en-us/k493b04s))

The char to check.

 Return Value

true if the specified char is negative sign; otherwise, false.

Solve.NET Math Expression Parser  
IsNumber Method (c)

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [NumberExpression](#chmtopic39) > IsNumber(Char)

Determines whether the specified char is a number.

 Syntax

**public** **static** [bool](http://msdn2.microsoft.com/en-us/a28wyd50) IsNumber (

[char](http://msdn2.microsoft.com/en-us/k493b04s) c

)

 Parameters

c ([Char](http://msdn2.microsoft.com/en-us/k493b04s))

The char to test.

 Return Value

true if the specified char is a number; otherwise, false.

 Remarks

This method checks if the char is a digit or a decimal separator.

Solve.NET Math Expression Parser  
ToString Method

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [NumberExpression](#chmtopic39) > ToString()

Returns a [String](http://msdn2.microsoft.com/en-us/s1wwdcbf) that represents the current [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).

 Syntax

**public** **override** [string](http://msdn2.microsoft.com/en-us/s1wwdcbf) ToString ()

 Return Value

A [String](http://msdn2.microsoft.com/en-us/s1wwdcbf) that represents the current [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).

Solve.NET Math Expression Parser  
Value Property

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [NumberExpression](#chmtopic39) > Value

Gets the number value for this expression.

 Syntax

**public** [double](http://msdn2.microsoft.com/en-us/643eft0t) Value { get; }

 Field Value

The number value.

Solve.NET Math Expression Parser  
OperatorExpression Class

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > OperatorExpression

Class representing a math operator expression.

 Syntax

**public** **class** OperatorExpression : [ExpressionBase](#chmtopic10)

 Members

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| All Members | Constructors | Methods | Properties | Fields | Events |
| Public Protected | | Instance Static | | Declared Inherited | |

|  |  |  |
| --- | --- | --- |
| **Icon** | **Member** | **Description** |
|  | [**OperatorExpressionNew**(String)](#chmtopic47) | Initializes a new instance of the OperatorExpression class. |
|  | [Add(Double**[]()**)](#chmtopic48) | Adds the specified numbers. |
|  | [ArgumentCount](#chmtopic49) | Gets the number of arguments this expression uses.  (Overrides [ExpressionBase](#chmtopic10).[ArgumentCount](#chmtopic12).) |
|  | [Divide(Double**[]()**)](#chmtopic50) | Divides the specified numbers. |
|  | [Equals(Object)](http://msdn2.microsoft.com/en-us/bsc2ak47) | Determines whether the specified [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) is equal to the current [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [Evaluate](#chmtopic13) | Gets or sets the evaluate delegate.  (Inherited from [ExpressionBase](#chmtopic10).) |
|  | [Finalize()](http://msdn2.microsoft.com/en-us/4k87zsw7) | Allows an [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) to attempt to free resources and perform other cleanup operations before the [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) is reclaimed by garbage collection.  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [GetHashCode()](http://msdn2.microsoft.com/en-us/zdee4b3y) | Serves as a hash function for a particular type. [GetHashCode()](http://msdn2.microsoft.com/en-us/zdee4b3y) is suitable for use in hashing algorithms and data structures like a hash table.  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [GetType()](http://msdn2.microsoft.com/en-us/dfwy45w9) | Gets the [Type](http://msdn2.microsoft.com/en-us/42892f65) of the current instance.  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
| static member | [IsSymbol(String)](#chmtopic53) | Determines whether the specified string is a math symbol. |
| static member | [IsSymbol(Char)](#chmtopic52) | Determines whether the specified char is a math symbol. |
|  | [MathOperator](#chmtopic54) | Gets the math operator. |
|  | [MemberwiseClone()](http://msdn2.microsoft.com/en-us/57ctke0a) | Creates a shallow copy of the current [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [Modulo(Double**[]()**)](#chmtopic55) | Modulo the specified numbers. |
|  | [Multiple(Double**[]()**)](#chmtopic56) | Multiples the specified numbers. |
|  | [Power(Double**[]()**)](#chmtopic57) | Power for the specified numbers. |
|  | [Subtract(Double**[]()**)](#chmtopic58) | Subtracts the specified numbers. |
|  | [ToString()](#chmtopic59) | Returns a [String](http://msdn2.microsoft.com/en-us/s1wwdcbf) that represents the current [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).  (Overrides [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).[ToString()](http://msdn2.microsoft.com/en-us/7bxwbwt2).) |
|  | [Validate(Double**[]()**)](#chmtopic14) | Validates the specified numbers for the expression.  (Inherited from [ExpressionBase](#chmtopic10).) |

 Inheritance Hierarchy

|  |  |  |
| --- | --- | --- |
| [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) | | |
|  | [ExpressionBase](#chmtopic10) | |
|  |  | OperatorExpression |

Solve.NET Math Expression Parser  
OperatorExpression Constructor (operator)

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [OperatorExpression](#chmtopic46) > **OperatorExpressionNew**(String)

Initializes a new instance of the [OperatorExpression](#chmtopic46) class.

 Syntax

**public** OperatorExpression (

[string](http://msdn2.microsoft.com/en-us/s1wwdcbf) operator

)

 Parameters

operator ([String](http://msdn2.microsoft.com/en-us/s1wwdcbf))

The operator to use for this class.

 Exceptions

|  |  |
| --- | --- |
| **Exception** | **Condition** |
| [ArgumentNullException](http://msdn2.microsoft.com/en-us/27426hcy) | When the operator is null or empty. |
| [ArgumentException](http://msdn2.microsoft.com/en-us/3w1b3114) | When the operator is invalid. |

Solve.NET Math Expression Parser  
Add Method (numbers)

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [OperatorExpression](#chmtopic46) > Add(Double**[]()**)

Adds the specified numbers.

 Syntax

**public** [double](http://msdn2.microsoft.com/en-us/643eft0t) Add (

[double](http://msdn2.microsoft.com/en-us/643eft0t)[] numbers

)

 Parameters

numbers ([Double](http://msdn2.microsoft.com/en-us/643eft0t)[]())

The numbers.

 Return Value

The result of the operation.

 Exceptions

|  |  |
| --- | --- |
| **Exception** | **Condition** |
| [ArgumentNullException](http://msdn2.microsoft.com/en-us/27426hcy) | When numbers is null. |
| [ArgumentException](http://msdn2.microsoft.com/en-us/3w1b3114) | When the length of numbers do not equal [ArgumentCount](#chmtopic49). |

Solve.NET Math Expression Parser  
ArgumentCount Property

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [OperatorExpression](#chmtopic46) > ArgumentCount

Gets the number of arguments this expression uses.

 Syntax

**public** **override** [int](http://msdn2.microsoft.com/en-us/td2s409d) ArgumentCount { get; }

 Field Value

The argument count.

Solve.NET Math Expression Parser  
Divide Method (numbers)

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [OperatorExpression](#chmtopic46) > Divide(Double**[]()**)

Divides the specified numbers.

 Syntax

**public** [double](http://msdn2.microsoft.com/en-us/643eft0t) Divide (

[double](http://msdn2.microsoft.com/en-us/643eft0t)[] numbers

)

 Parameters

numbers ([Double](http://msdn2.microsoft.com/en-us/643eft0t)[]())

The numbers.

 Return Value

The result of the operation.

 Exceptions

|  |  |
| --- | --- |
| **Exception** | **Condition** |
| [ArgumentNullException](http://msdn2.microsoft.com/en-us/27426hcy) | When numbers is null. |
| [ArgumentException](http://msdn2.microsoft.com/en-us/3w1b3114) | When the length of numbers do not equal [ArgumentCount](#chmtopic49). |

Solve.NET Math Expression Parser  
IsSymbol Method

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [OperatorExpression](#chmtopic46) > IsSymbol

 Members

|  |  |  |
| --- | --- | --- |
| **Icon** | **Member** | **Description** |
| static member | [IsSymbol(Char)](#chmtopic52) | Determines whether the specified char is a math symbol. |
| static member | [IsSymbol(String)](#chmtopic53) | Determines whether the specified string is a math symbol. |

Solve.NET Math Expression Parser  
IsSymbol Method (c)

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [OperatorExpression](#chmtopic46) > IsSymbol(Char)

Determines whether the specified char is a math symbol.

 Syntax

**public** **static** [bool](http://msdn2.microsoft.com/en-us/a28wyd50) IsSymbol (

[char](http://msdn2.microsoft.com/en-us/k493b04s) c

)

 Parameters

c ([Char](http://msdn2.microsoft.com/en-us/k493b04s))

The char to check.

 Return Value

true if the specified char is a math symbol; otherwise, false.

Solve.NET Math Expression Parser  
IsSymbol Method (s)

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [OperatorExpression](#chmtopic46) > IsSymbol(String)

Determines whether the specified string is a math symbol.

 Syntax

|  |  |  |
| --- | --- | --- |
| C# | Visual Basic | Managed C++ |

**public** **static** [bool](http://msdn2.microsoft.com/en-us/a28wyd50) IsSymbol (

[string](http://msdn2.microsoft.com/en-us/s1wwdcbf) s

)

 Parameters

s ([String](http://msdn2.microsoft.com/en-us/s1wwdcbf))

The string to check.

 Return Value

true if the specified string is a math symbol; otherwise, false.

Solve.NET Math Expression Parser  
MathOperator Property

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [OperatorExpression](#chmtopic46) > MathOperator

Gets the math operator.

 Syntax

**public** [MathOperators](#chmtopic38) MathOperator { get; }

 Field Value

The math operator.

Solve.NET Math Expression Parser  
Modulo Method (numbers)

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [OperatorExpression](#chmtopic46) > Modulo(Double**[]()**)

Modulo the specified numbers.

 Syntax

**public** [double](http://msdn2.microsoft.com/en-us/643eft0t) Modulo (

[double](http://msdn2.microsoft.com/en-us/643eft0t)[] numbers

)

 Parameters

numbers ([Double](http://msdn2.microsoft.com/en-us/643eft0t)[]())

The numbers.

 Return Value

The result of the operation.

 Exceptions

|  |  |
| --- | --- |
| **Exception** | **Condition** |
| [ArgumentNullException](http://msdn2.microsoft.com/en-us/27426hcy) | When numbers is null. |
| [ArgumentException](http://msdn2.microsoft.com/en-us/3w1b3114) | When the length of numbers do not equal [ArgumentCount](#chmtopic49). |

Solve.NET Math Expression Parser  
Multiple Method (numbers)

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [OperatorExpression](#chmtopic46) > Multiple(Double**[]()**)

Multiples the specified numbers.

 Syntax

**public** [double](http://msdn2.microsoft.com/en-us/643eft0t) Multiple (

[double](http://msdn2.microsoft.com/en-us/643eft0t)[] numbers

)

 Parameters

numbers ([Double](http://msdn2.microsoft.com/en-us/643eft0t)[]())

The numbers.

 Return Value

The result of the operation.

 Exceptions

|  |  |
| --- | --- |
| **Exception** | **Condition** |
| [ArgumentNullException](http://msdn2.microsoft.com/en-us/27426hcy) | When numbers is null. |
| [ArgumentException](http://msdn2.microsoft.com/en-us/3w1b3114) | When the length of numbers do not equal [ArgumentCount](#chmtopic49). |

Solve.NET Math Expression Parser  
Power Method (numbers)

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [OperatorExpression](#chmtopic46) > Power(Double**[]()**)

Power for the specified numbers.

 Syntax

**public** [double](http://msdn2.microsoft.com/en-us/643eft0t) Power (

[double](http://msdn2.microsoft.com/en-us/643eft0t)[] numbers

)

 Parameters

numbers ([Double](http://msdn2.microsoft.com/en-us/643eft0t)[]())

The numbers.

 Return Value

The result of the operation.

 Exceptions

|  |  |
| --- | --- |
| **Exception** | **Condition** |
| [ArgumentNullException](http://msdn2.microsoft.com/en-us/27426hcy) | When numbers is null. |
| [ArgumentException](http://msdn2.microsoft.com/en-us/3w1b3114) | When the length of numbers do not equal [ArgumentCount](#chmtopic49). |

Solve.NET Math Expression Parser  
Subtract Method (numbers)

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [OperatorExpression](#chmtopic46) > Subtract(Double**[]()**)

Subtracts the specified numbers.

 Syntax

**public** [double](http://msdn2.microsoft.com/en-us/643eft0t) Subtract (

[double](http://msdn2.microsoft.com/en-us/643eft0t)[] numbers

)

 Parameters

numbers ([Double](http://msdn2.microsoft.com/en-us/643eft0t)[]())

The numbers.

 Return Value

The result of the operation.

 Exceptions

|  |  |
| --- | --- |
| **Exception** | **Condition** |
| [ArgumentNullException](http://msdn2.microsoft.com/en-us/27426hcy) | When numbers is null. |
| [ArgumentException](http://msdn2.microsoft.com/en-us/3w1b3114) | When the length of numbers do not equal [ArgumentCount](#chmtopic49). |

Solve.NET Math Expression Parser  
ToString Method

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [OperatorExpression](#chmtopic46) > ToString()

Returns a [String](http://msdn2.microsoft.com/en-us/s1wwdcbf) that represents the current [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).

 Syntax

**public** **override** [string](http://msdn2.microsoft.com/en-us/s1wwdcbf) ToString ()

 Return Value

A [String](http://msdn2.microsoft.com/en-us/s1wwdcbf) that represents the current [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).

Solve.NET Math Expression Parser  
ParseException Class

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > ParseException

The exception that is thrown when there is an error parsing a math expression.

 Syntax

[[SerializableAttribute](http://msdn2.microsoft.com/en-us/bcfsa90a)]

**public** **class** ParseException : [Exception](http://msdn2.microsoft.com/en-us/c18k6c59)

 Members

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| All Members | Constructors | Methods | Properties | Fields | Events |
| Public Protected | | Instance Static | | Declared Inherited | |

|  |  |  |
| --- | --- | --- |
| **Icon** | **Member** | **Description** |
|  | [**ParseExceptionNew**()](#chmtopic62) | Initializes a new instance of the ParseException class. |
|  | [**ParseExceptionNew**(String)](#chmtopic64) | Initializes a new instance of the ParseException class. |
|  | [**ParseExceptionNew**(String, Exception)](#chmtopic65) | Initializes a new instance of the ParseException class. |
|  | [**ParseExceptionNew**(SerializationInfo, StreamingContext)](#chmtopic63) | Initializes a new instance of the ParseException class with serialized data. |
|  | [Data](http://msdn2.microsoft.com/en-us/2wyfbc48) | Gets a collection of key/value pairs that provide additional, user-defined information about the exception.  (Inherited from [Exception](http://msdn2.microsoft.com/en-us/c18k6c59).) |
|  | [Equals(Object)](http://msdn2.microsoft.com/en-us/bsc2ak47) | Determines whether the specified [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) is equal to the current [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [Finalize()](http://msdn2.microsoft.com/en-us/4k87zsw7) | Allows an [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) to attempt to free resources and perform other cleanup operations before the [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) is reclaimed by garbage collection.  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [GetBaseException()](http://msdn2.microsoft.com/en-us/49kcee3b) | When overridden in a derived class, returns the [Exception](http://msdn2.microsoft.com/en-us/c18k6c59) that is the root cause of one or more subsequent exceptions.  (Inherited from [Exception](http://msdn2.microsoft.com/en-us/c18k6c59).) |
|  | [GetHashCode()](http://msdn2.microsoft.com/en-us/zdee4b3y) | Serves as a hash function for a particular type. [GetHashCode()](http://msdn2.microsoft.com/en-us/zdee4b3y) is suitable for use in hashing algorithms and data structures like a hash table.  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [GetObjectData(SerializationInfo, StreamingContext)](http://msdn2.microsoft.com/en-us/fwb1489e) | When overridden in a derived class, sets the [SerializationInfo](http://msdn2.microsoft.com/en-us/a9b6042e) with information about the exception.  (Inherited from [Exception](http://msdn2.microsoft.com/en-us/c18k6c59).) |
|  | [GetType()](http://msdn2.microsoft.com/en-us/44zb316t) | Gets the runtime type of the current instance.  (Inherited from [Exception](http://msdn2.microsoft.com/en-us/c18k6c59).) |
|  | [HelpLink](http://msdn2.microsoft.com/en-us/71tawy4s) | Gets or sets a link to the help file associated with this exception.  (Inherited from [Exception](http://msdn2.microsoft.com/en-us/c18k6c59).) |
|  | [HResult](http://msdn2.microsoft.com/en-us/sh5cw61c) | Gets or sets HRESULT, a coded numerical value that is assigned to a specific exception.  (Inherited from [Exception](http://msdn2.microsoft.com/en-us/c18k6c59).) |
|  | [InnerException](http://msdn2.microsoft.com/en-us/902sca80) | Gets the [Exception](http://msdn2.microsoft.com/en-us/c18k6c59) instance that caused the current exception.  (Inherited from [Exception](http://msdn2.microsoft.com/en-us/c18k6c59).) |
|  | [MemberwiseClone()](http://msdn2.microsoft.com/en-us/57ctke0a) | Creates a shallow copy of the current [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [Message](http://msdn2.microsoft.com/en-us/9btwf6wk) | Gets a message that describes the current exception.  (Inherited from [Exception](http://msdn2.microsoft.com/en-us/c18k6c59).) |
|  | [Source](http://msdn2.microsoft.com/en-us/85weac5w) | Gets or sets the name of the application or the object that causes the error.  (Inherited from [Exception](http://msdn2.microsoft.com/en-us/c18k6c59).) |
|  | [StackTrace](http://msdn2.microsoft.com/en-us/dxzhy005) | Gets a string representation of the frames on the call stack at the time the current exception was thrown.  (Inherited from [Exception](http://msdn2.microsoft.com/en-us/c18k6c59).) |
|  | [TargetSite](http://msdn2.microsoft.com/en-us/2wchw354) | Gets the method that throws the current exception.  (Inherited from [Exception](http://msdn2.microsoft.com/en-us/c18k6c59).) |
|  | [ToString()](http://msdn2.microsoft.com/en-us/es4y6f7e) | Creates and returns a string representation of the current exception.  (Inherited from [Exception](http://msdn2.microsoft.com/en-us/c18k6c59).) |

 Inheritance Hierarchy

|  |  |  |
| --- | --- | --- |
| [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) | | |
|  | [Exception](http://msdn2.microsoft.com/en-us/c18k6c59) | |
|  |  | ParseException |

Solve.NET Math Expression Parser  
ParseException Constructor

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [ParseException](#chmtopic60) > **ParseExceptionNew**

 Members

|  |  |  |
| --- | --- | --- |
| **Icon** | **Member** | **Description** |
|  | [**ParseExceptionNew**()](#chmtopic62) | Initializes a new instance of the [ParseException](#chmtopic60) class. |
|  | [**ParseExceptionNew**(SerializationInfo, StreamingContext)](#chmtopic63) | Initializes a new instance of the [ParseException](#chmtopic60) class with serialized data. |
|  | [**ParseExceptionNew**(String)](#chmtopic64) | Initializes a new instance of the [ParseException](#chmtopic60) class. |
|  | [**ParseExceptionNew**(String, Exception)](#chmtopic65) | Initializes a new instance of the [ParseException](#chmtopic60) class. |

Solve.NET Math Expression Parser  
ParseException Constructor

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [ParseException](#chmtopic60) > **ParseExceptionNew**()

Initializes a new instance of the [ParseException](#chmtopic60) class.

 Syntax

**public** ParseException ()

Solve.NET Math Expression Parser  
ParseException Constructor (info, context)

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [ParseException](#chmtopic60) > **ParseExceptionNew**(SerializationInfo, StreamingContext)

Initializes a new instance of the [ParseException](#chmtopic60) class with serialized data.

 Syntax

**protected** ParseException (

[SerializationInfo](http://msdn2.microsoft.com/en-us/a9b6042e) info,

[StreamingContext](http://msdn2.microsoft.com/en-us/t16abws5) context

)

 Parameters

info ([SerializationInfo](http://msdn2.microsoft.com/en-us/a9b6042e))

The SerializationInfo that holds the serialized object data about the exception being thrown.

context ([StreamingContext](http://msdn2.microsoft.com/en-us/t16abws5))

The StreamingContext that contains contextual information about the source or destination.

Solve.NET Math Expression Parser  
ParseException Constructor (message)

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [ParseException](#chmtopic60) > **ParseExceptionNew**(String)

Initializes a new instance of the [ParseException](#chmtopic60) class.

 Syntax

**public** ParseException (

[string](http://msdn2.microsoft.com/en-us/s1wwdcbf) message

)

 Parameters

message ([String](http://msdn2.microsoft.com/en-us/s1wwdcbf))

The message.

Solve.NET Math Expression Parser  
ParseException Constructor (message, innerException)

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [ParseException](#chmtopic60) > **ParseExceptionNew**(String, Exception)

Initializes a new instance of the [ParseException](#chmtopic60) class.

 Syntax

**public** ParseException (

[string](http://msdn2.microsoft.com/en-us/s1wwdcbf) message,

[Exception](http://msdn2.microsoft.com/en-us/c18k6c59) innerException

)

 Parameters

message ([String](http://msdn2.microsoft.com/en-us/s1wwdcbf))

The message.

innerException ([Exception](http://msdn2.microsoft.com/en-us/c18k6c59))

The inner exception

Solve.NET Math Expression Parser  
VariableDictionary Class

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > VariableDictionary

Class representing a collection of variable names and values.

 Syntax

[[SerializableAttribute](http://msdn2.microsoft.com/en-us/bcfsa90a)]

**public** **class** VariableDictionary : [Dictionary](http://msdn2.microsoft.com/en-us/xfhwa508)<[string](http://msdn2.microsoft.com/en-us/s1wwdcbf), [double](http://msdn2.microsoft.com/en-us/643eft0t)>

 Members

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| All Members | Constructors | Methods | Properties | Fields | Events |
| Public Protected | | Instance Static | | Declared Inherited | |

|  |  |  |
| --- | --- | --- |
| **Icon** | **Member** | **Description** |
|  | [**VariableDictionaryNew**(SerializationInfo, StreamingContext)](#chmtopic67) | Initializes a new instance of the VariableDictionary class. |
|  | [Add(String, Double)](#chmtopic68) | Adds the specified variable and value to the dictionary.  (Overrides [Dictionary](http://msdn2.microsoft.com/en-us/xfhwa508)<(Of [String](http://msdn2.microsoft.com/en-us/s1wwdcbf), [Double](http://msdn2.microsoft.com/en-us/643eft0t)>).[Add(String, Double)](http://msdn2.microsoft.com/en-us/k7z0zy8k).) |
|  | [Clear()](http://msdn2.microsoft.com/en-us/b5txwy7s) | Removes all keys and values from the [Dictionary**<(Of** TKey, TValue**>)**](http://msdn2.microsoft.com/en-us/xfhwa508).  (Inherited from [Dictionary](http://msdn2.microsoft.com/en-us/xfhwa508)<(Of [String](http://msdn2.microsoft.com/en-us/s1wwdcbf), [Double](http://msdn2.microsoft.com/en-us/643eft0t)>).) |
|  | [Comparer](http://msdn2.microsoft.com/en-us/ms132092) | Gets the [IEqualityComparer**<(Of** T**>)**](http://msdn2.microsoft.com/en-us/ms132151) that is used to determine equality of keys for the dictionary.  (Inherited from [Dictionary](http://msdn2.microsoft.com/en-us/xfhwa508)<(Of [String](http://msdn2.microsoft.com/en-us/s1wwdcbf), [Double](http://msdn2.microsoft.com/en-us/643eft0t)>).) |
|  | [ContainsKey(String)](http://msdn2.microsoft.com/en-us/kw5aaea4) | Determines whether the [Dictionary**<(Of** TKey, TValue**>)**](http://msdn2.microsoft.com/en-us/xfhwa508) contains the specified key.  (Inherited from [Dictionary](http://msdn2.microsoft.com/en-us/xfhwa508)<(Of [String](http://msdn2.microsoft.com/en-us/s1wwdcbf), [Double](http://msdn2.microsoft.com/en-us/643eft0t)>).) |
|  | [ContainsValue(Double)](http://msdn2.microsoft.com/en-us/a63811ah) | Determines whether the [Dictionary**<(Of** TKey, TValue**>)**](http://msdn2.microsoft.com/en-us/xfhwa508) contains a specific value.  (Inherited from [Dictionary](http://msdn2.microsoft.com/en-us/xfhwa508)<(Of [String](http://msdn2.microsoft.com/en-us/s1wwdcbf), [Double](http://msdn2.microsoft.com/en-us/643eft0t)>).) |
|  | [Count](http://msdn2.microsoft.com/en-us/zhcy256f) | Gets the number of key/value pairs contained in the [Dictionary**<(Of** TKey, TValue**>)**](http://msdn2.microsoft.com/en-us/xfhwa508).  (Inherited from [Dictionary](http://msdn2.microsoft.com/en-us/xfhwa508)<(Of [String](http://msdn2.microsoft.com/en-us/s1wwdcbf), [Double](http://msdn2.microsoft.com/en-us/643eft0t)>).) |
|  | [Equals(Object)](http://msdn2.microsoft.com/en-us/bsc2ak47) | Determines whether the specified [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) is equal to the current [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [Finalize()](http://msdn2.microsoft.com/en-us/4k87zsw7) | Allows an [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) to attempt to free resources and perform other cleanup operations before the [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) is reclaimed by garbage collection.  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [GetEnumerator()](http://msdn2.microsoft.com/en-us/9c6ftx8b) | Returns an enumerator that iterates through the [Dictionary**<(Of** TKey, TValue**>)**](http://msdn2.microsoft.com/en-us/xfhwa508).  (Inherited from [Dictionary](http://msdn2.microsoft.com/en-us/xfhwa508)<(Of [String](http://msdn2.microsoft.com/en-us/s1wwdcbf), [Double](http://msdn2.microsoft.com/en-us/643eft0t)>).) |
|  | [GetHashCode()](http://msdn2.microsoft.com/en-us/zdee4b3y) | Serves as a hash function for a particular type. [GetHashCode()](http://msdn2.microsoft.com/en-us/zdee4b3y) is suitable for use in hashing algorithms and data structures like a hash table.  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [GetObjectData(SerializationInfo, StreamingContext)](#chmtopic69) | Implements the [ISerializable](http://msdn2.microsoft.com/en-us/wf4375ks) interface and returns the data needed to serialize the [Dictionary**<(Of** TKey, TValue**>)**](http://msdn2.microsoft.com/en-us/xfhwa508) instance.  (Overrides [Dictionary](http://msdn2.microsoft.com/en-us/xfhwa508)<(Of [String](http://msdn2.microsoft.com/en-us/s1wwdcbf), [Double](http://msdn2.microsoft.com/en-us/643eft0t)>).[GetObjectData(SerializationInfo, StreamingContext)](http://msdn2.microsoft.com/en-us/yy8be3bb).) |
|  | [GetType()](http://msdn2.microsoft.com/en-us/dfwy45w9) | Gets the [Type](http://msdn2.microsoft.com/en-us/42892f65) of the current instance.  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [Item(String)](http://msdn2.microsoft.com/en-us/9tee9ht2) | Gets or sets the value associated with the specified key.  (Inherited from [Dictionary](http://msdn2.microsoft.com/en-us/xfhwa508)<(Of [String](http://msdn2.microsoft.com/en-us/s1wwdcbf), [Double](http://msdn2.microsoft.com/en-us/643eft0t)>).) |
|  | [Keys](http://msdn2.microsoft.com/en-us/yt2fy5zk) | Gets a collection containing the keys in the [Dictionary**<(Of** TKey, TValue**>)**](http://msdn2.microsoft.com/en-us/xfhwa508).  (Inherited from [Dictionary](http://msdn2.microsoft.com/en-us/xfhwa508)<(Of [String](http://msdn2.microsoft.com/en-us/s1wwdcbf), [Double](http://msdn2.microsoft.com/en-us/643eft0t)>).) |
|  | [MemberwiseClone()](http://msdn2.microsoft.com/en-us/57ctke0a) | Creates a shallow copy of the current [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [OnDeserialization(Object)](http://msdn2.microsoft.com/en-us/t71h85y4) | Implements the [ISerializable](http://msdn2.microsoft.com/en-us/wf4375ks) interface and raises the deserialization event when the deserialization is complete.  (Inherited from [Dictionary](http://msdn2.microsoft.com/en-us/xfhwa508)<(Of [String](http://msdn2.microsoft.com/en-us/s1wwdcbf), [Double](http://msdn2.microsoft.com/en-us/643eft0t)>).) |
|  | [Remove(String)](http://msdn2.microsoft.com/en-us/kabs04ac) | Removes the value with the specified key from the [Dictionary**<(Of** TKey, TValue**>)**](http://msdn2.microsoft.com/en-us/xfhwa508).  (Inherited from [Dictionary](http://msdn2.microsoft.com/en-us/xfhwa508)<(Of [String](http://msdn2.microsoft.com/en-us/s1wwdcbf), [Double](http://msdn2.microsoft.com/en-us/643eft0t)>).) |
|  | [ToString()](http://msdn2.microsoft.com/en-us/7bxwbwt2) | Returns a [String](http://msdn2.microsoft.com/en-us/s1wwdcbf) that represents the current [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [TryGetValue(String, Double)](http://msdn2.microsoft.com/en-us/bb347013) | (Inherited from [Dictionary](http://msdn2.microsoft.com/en-us/xfhwa508)<(Of [String](http://msdn2.microsoft.com/en-us/s1wwdcbf), [Double](http://msdn2.microsoft.com/en-us/643eft0t)>).) |
|  | [Values](http://msdn2.microsoft.com/en-us/ekcfxy3x) | Gets a collection containing the values in the [Dictionary**<(Of** TKey, TValue**>)**](http://msdn2.microsoft.com/en-us/xfhwa508).  (Inherited from [Dictionary](http://msdn2.microsoft.com/en-us/xfhwa508)<(Of [String](http://msdn2.microsoft.com/en-us/s1wwdcbf), [Double](http://msdn2.microsoft.com/en-us/643eft0t)>).) |

 Remarks

Variable names can only contain letters, numbers and symbols are not allowed.

 Inheritance Hierarchy

|  |  |  |
| --- | --- | --- |
| [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) | | |
|  | [Dictionary](http://msdn2.microsoft.com/en-us/xfhwa508)<(Of [String](http://msdn2.microsoft.com/en-us/s1wwdcbf), [Double](http://msdn2.microsoft.com/en-us/643eft0t)>) | |
|  |  | VariableDictionary |

Solve.NET Math Expression Parser  
VariableDictionary Constructor (info, context)

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [VariableDictionary](#chmtopic66) > **VariableDictionaryNew**(SerializationInfo, StreamingContext)

Initializes a new instance of the [VariableDictionary](#chmtopic66) class.

 Syntax

**protected** VariableDictionary (

[SerializationInfo](http://msdn2.microsoft.com/en-us/a9b6042e) info,

[StreamingContext](http://msdn2.microsoft.com/en-us/t16abws5) context

)

 Parameters

info ([SerializationInfo](http://msdn2.microsoft.com/en-us/a9b6042e))

A [SerializationInfo](http://msdn2.microsoft.com/en-us/a9b6042e) object containing the information required to serialize the [Dictionary**<(Of** TKey, TValue**>)**](http://msdn2.microsoft.com/en-us/xfhwa508).

context ([StreamingContext](http://msdn2.microsoft.com/en-us/t16abws5))

A [StreamingContext](http://msdn2.microsoft.com/en-us/t16abws5) structure containing the source and destination of the serialized stream associated with the [Dictionary**<(Of** TKey, TValue**>)**](http://msdn2.microsoft.com/en-us/xfhwa508)

Solve.NET Math Expression Parser  
Add Method (name, value)

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [VariableDictionary](#chmtopic66) > Add(String, Double)

Adds the specified variable and value to the dictionary.

 Syntax

**public** **void** Add (

[string](http://msdn2.microsoft.com/en-us/s1wwdcbf) name,

[double](http://msdn2.microsoft.com/en-us/643eft0t) value

)

 Parameters

name ([String](http://msdn2.microsoft.com/en-us/s1wwdcbf))

The name of the variable to add.

value ([Double](http://msdn2.microsoft.com/en-us/643eft0t))

The value of the variable.

 Exceptions

|  |  |
| --- | --- |
| **Exception** | **Condition** |
| [ArgumentNullException](http://msdn2.microsoft.com/en-us/27426hcy) | When variable name is null. |
| [ArgumentException](http://msdn2.microsoft.com/en-us/3w1b3114) | When variable name contains non-letters or the name exists in the [Functions](#chmtopic35) list. |

 See Also

[MathEvaluator](#chmtopic27)  
[Variables](#chmtopic37)  
[Functions](#chmtopic35)

Solve.NET Math Expression Parser  
GetObjectData Method (info, context)

[Namespaces](#chmtopic1) > [Solve.NET](#chmtopic2) > [VariableDictionary](#chmtopic66) > GetObjectData(SerializationInfo, StreamingContext)

Implements the [ISerializable](http://msdn2.microsoft.com/en-us/wf4375ks) interface and returns the data needed to serialize the [Dictionary**<(Of** TKey, TValue**>)**](http://msdn2.microsoft.com/en-us/xfhwa508) instance.

 Syntax

**public** **override** **void** GetObjectData (

[SerializationInfo](http://msdn2.microsoft.com/en-us/a9b6042e) info,

[StreamingContext](http://msdn2.microsoft.com/en-us/t16abws5) context

)

 Parameters

info ([SerializationInfo](http://msdn2.microsoft.com/en-us/a9b6042e))

A [SerializationInfo](http://msdn2.microsoft.com/en-us/a9b6042e) object that contains the information required to serialize the [Dictionary**<(Of** TKey, TValue**>)**](http://msdn2.microsoft.com/en-us/xfhwa508) instance.

context ([StreamingContext](http://msdn2.microsoft.com/en-us/t16abws5))

A [StreamingContext](http://msdn2.microsoft.com/en-us/t16abws5) structure that contains the source and destination of the serialized stream associated with the [Dictionary**<(Of** TKey, TValue**>)**](http://msdn2.microsoft.com/en-us/xfhwa508) instance.

Solve.NET Math Expression Parser  
Solve.NET.Metadata Namespace

[Namespaces](#chmtopic1) > Solve.NET.Metadata

Contains classes for working with metadata.

 Syntax

**namespace** Solve.NET.Metadata

 Types

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| All Types | Classes | Structures | Interfaces | Enumerations | Delegates |

|  |  |  |
| --- | --- | --- |
| **Icon** | **Name** | **Description** |
| public class | [AbbreviationAttribute](#chmtopic71) | Specifies an abbreviation for a instance. |
| public class | [AttributeReader](#chmtopic75) | A class to read attributes from type members. |

Solve.NET Math Expression Parser  
AbbreviationAttribute Class

[Namespaces](#chmtopic1) > [Solve.NET.Metadata](#chmtopic70) > AbbreviationAttribute

Specifies an abbreviation for a instance.

 Syntax

**public** **sealed** **class** AbbreviationAttribute : [Attribute](http://msdn2.microsoft.com/en-us/e8kc3626)

 Members

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| All Members | Constructors | Methods | Properties | Fields | Events |
| Public Protected | | Instance Static | | Declared Inherited | |

|  |  |  |
| --- | --- | --- |
| **Icon** | **Member** | **Description** |
|  | [**AbbreviationAttributeNew**(String)](#chmtopic72) | Initializes a new instance of the AbbreviationAttribute class. |
|  | [Equals(Object)](http://msdn2.microsoft.com/en-us/09ds241w) | Returns a value that indicates whether this instance is equal to a specified object.  (Inherited from [Attribute](http://msdn2.microsoft.com/en-us/e8kc3626).) |
|  | [Finalize()](http://msdn2.microsoft.com/en-us/4k87zsw7) | Allows an [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) to attempt to free resources and perform other cleanup operations before the [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) is reclaimed by garbage collection.  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [GetHashCode()](http://msdn2.microsoft.com/en-us/365e1bxs) | Returns the hash code for this instance.  (Inherited from [Attribute](http://msdn2.microsoft.com/en-us/e8kc3626).) |
|  | [GetType()](http://msdn2.microsoft.com/en-us/dfwy45w9) | Gets the [Type](http://msdn2.microsoft.com/en-us/42892f65) of the current instance.  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [IsDefaultAttribute()](http://msdn2.microsoft.com/en-us/tbkb5x6t) | When overridden in a derived class, indicates whether the value of this instance is the default value for the derived class.  (Inherited from [Attribute](http://msdn2.microsoft.com/en-us/e8kc3626).) |
|  | [Match(Object)](http://msdn2.microsoft.com/en-us/wy7chz44) | When overridden in a derived class, returns a value that indicates whether this instance equals a specified object.  (Inherited from [Attribute](http://msdn2.microsoft.com/en-us/e8kc3626).) |
|  | [MemberwiseClone()](http://msdn2.microsoft.com/en-us/57ctke0a) | Creates a shallow copy of the current [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).  (Inherited from [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).) |
|  | [Text](#chmtopic73) | Gets the abbreviation text. |
|  | [ToString()](#chmtopic74) | Returns a [String](http://msdn2.microsoft.com/en-us/s1wwdcbf) that represents the current [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).  (Overrides [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).[ToString()](http://msdn2.microsoft.com/en-us/7bxwbwt2).) |
|  | [TypeId](http://msdn2.microsoft.com/en-us/sa1bf03e) | When implemented in a derived class, gets a unique identifier for this [Attribute](http://msdn2.microsoft.com/en-us/e8kc3626).  (Inherited from [Attribute](http://msdn2.microsoft.com/en-us/e8kc3626).) |

 Inheritance Hierarchy

|  |  |  |
| --- | --- | --- |
| [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) | | |
|  | [Attribute](http://msdn2.microsoft.com/en-us/e8kc3626) | |
|  |  | AbbreviationAttribute |

Solve.NET Math Expression Parser  
AbbreviationAttribute Constructor (text)

[Namespaces](#chmtopic1) > [Solve.NET.Metadata](#chmtopic70) > [AbbreviationAttribute](#chmtopic71) > **AbbreviationAttributeNew**(String)

Initializes a new instance of the [AbbreviationAttribute](#chmtopic71) class.

 Syntax

**public** AbbreviationAttribute (

[string](http://msdn2.microsoft.com/en-us/s1wwdcbf) text

)

 Parameters

text ([String](http://msdn2.microsoft.com/en-us/s1wwdcbf))

The abbreviation text.

Solve.NET Math Expression Parser  
Text Property

[Namespaces](#chmtopic1) > [Solve.NET.Metadata](#chmtopic70) > [AbbreviationAttribute](#chmtopic71) > Text

Gets the abbreviation text.

 Syntax

**public** [string](http://msdn2.microsoft.com/en-us/s1wwdcbf) Text { get; }

 Field Value

The abbreviation text.

Solve.NET Math Expression Parser  
ToString Method

[Namespaces](#chmtopic1) > [Solve.NET.Metadata](#chmtopic70) > [AbbreviationAttribute](#chmtopic71) > ToString()

Returns a [String](http://msdn2.microsoft.com/en-us/s1wwdcbf) that represents the current [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).

 Syntax

**public** **override** [string](http://msdn2.microsoft.com/en-us/s1wwdcbf) ToString ()

 Return Value

A [String](http://msdn2.microsoft.com/en-us/s1wwdcbf) that represents the current [Object](http://msdn2.microsoft.com/en-us/e5kfa45b).

Solve.NET Math Expression Parser  
AttributeReader Class

[Namespaces](#chmtopic1) > [Solve.NET.Metadata](#chmtopic70) > AttributeReader

A class to read attributes from type members.

 Syntax

**public** **static** **class** AttributeReader

 Members

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| All Members | Constructors | Methods | Properties | Fields | Events |
| Public Protected | | Instance Static | | Declared Inherited | |

|  |  |  |
| --- | --- | --- |
| **Icon** | **Member** | **Description** |
| static member | [GetAbbreviation**<(Of** T**>)**(T)](#chmtopic78) | Gets the abbreviation from the [AbbreviationAttribute](#chmtopic71) on an enum. |
| static member | [GetAbbreviation(MemberInfo)](#chmtopic77) | Gets the abbreviation from the [AbbreviationAttribute](#chmtopic71) on a instance. |
| static member | [GetDescription**<(Of** T**>)**(T)](#chmtopic81) | Gets the description from the [DescriptionAttribute](http://msdn2.microsoft.com/en-us/xwb66ftt) on an enum. |
| static member | [GetDescription(MemberInfo)](#chmtopic80) | Gets the description from the [DescriptionAttribute](http://msdn2.microsoft.com/en-us/xwb66ftt) on a MemberInfo. |

 Inheritance Hierarchy

|  |  |
| --- | --- |
| [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) | |
|  | AttributeReader |
|  |  |

Solve.NET Math Expression Parser  
GetAbbreviation Method

[Namespaces](#chmtopic1) > [Solve.NET.Metadata](#chmtopic70) > [AttributeReader](#chmtopic75) > GetAbbreviation

 Members

|  |  |  |
| --- | --- | --- |
| **Icon** | **Member** | **Description** |
| static member | [GetAbbreviation(MemberInfo)](#chmtopic77) | Gets the abbreviation from the [AbbreviationAttribute](#chmtopic71) on a instance. |
| static member | [GetAbbreviation**<(Of** T**>)**(T)](#chmtopic78) | Gets the abbreviation from the [AbbreviationAttribute](#chmtopic71) on an enum. |

Solve.NET Math Expression Parser  
GetAbbreviation Method (info)

[Namespaces](#chmtopic1) > [Solve.NET.Metadata](#chmtopic70) > [AttributeReader](#chmtopic75) > GetAbbreviation(MemberInfo)

Gets the abbreviation from the [AbbreviationAttribute](#chmtopic71) on a instance.

 Syntax

**public** **static** [string](http://msdn2.microsoft.com/en-us/s1wwdcbf) GetAbbreviation (

[MemberInfo](http://msdn2.microsoft.com/en-us/8fek28hz) info

)

 Parameters

info ([MemberInfo](http://msdn2.microsoft.com/en-us/8fek28hz))

The instance info look for the abbreviation.

 Return Value

The [Text](#chmtopic73) or the name of the instance.

 See Also

[AbbreviationAttribute](#chmtopic71)

Solve.NET Math Expression Parser  
GetAbbreviation**<(Of <**T**>)>** Method (instance)

[Namespaces](#chmtopic1) > [Solve.NET.Metadata](#chmtopic70) > [AttributeReader](#chmtopic75) > GetAbbreviation**<(Of** T**>)**(T)

Gets the abbreviation from the [AbbreviationAttribute](#chmtopic71) on an enum.

 Syntax

**public** **static** [string](http://msdn2.microsoft.com/en-us/s1wwdcbf) GetAbbreviation<T> (

T instance

)

 Type Parameters

T

An enum type.

 Parameters

instance (T)

The enum to get the abbreviation from.

 Return Value

The [Text](#chmtopic73) or the name of the memeber.

 See Also

[AbbreviationAttribute](#chmtopic71)

Solve.NET Math Expression Parser  
GetDescription Method

[Namespaces](#chmtopic1) > [Solve.NET.Metadata](#chmtopic70) > [AttributeReader](#chmtopic75) > GetDescription

 Members

|  |  |  |
| --- | --- | --- |
| **Icon** | **Member** | **Description** |
| static member | [GetDescription(MemberInfo)](#chmtopic80) | Gets the description from the [DescriptionAttribute](http://msdn2.microsoft.com/en-us/xwb66ftt) on a MemberInfo. |
| static member | [GetDescription**<(Of** T**>)**(T)](#chmtopic81) | Gets the description from the [DescriptionAttribute](http://msdn2.microsoft.com/en-us/xwb66ftt) on an enum. |

Solve.NET Math Expression Parser  
GetDescription Method (info)

[Namespaces](#chmtopic1) > [Solve.NET.Metadata](#chmtopic70) > [AttributeReader](#chmtopic75) > GetDescription(MemberInfo)

Gets the description from the [DescriptionAttribute](http://msdn2.microsoft.com/en-us/xwb66ftt) on a MemberInfo.

 Syntax

**public** **static** [string](http://msdn2.microsoft.com/en-us/s1wwdcbf) GetDescription (

[MemberInfo](http://msdn2.microsoft.com/en-us/8fek28hz) info

)

 Parameters

info ([MemberInfo](http://msdn2.microsoft.com/en-us/8fek28hz))

The member info to look for the description.

 Return Value

The [Description](http://msdn2.microsoft.com/en-us/ztwhwfdd) or the name of the member.

 See Also

[DescriptionAttribute](http://msdn2.microsoft.com/en-us/xwb66ftt)

Solve.NET Math Expression Parser  
GetDescription**<(Of <**T**>)>** Method (instance)

[Namespaces](#chmtopic1) > [Solve.NET.Metadata](#chmtopic70) > [AttributeReader](#chmtopic75) > GetDescription**<(Of** T**>)**(T)

Gets the description from the [DescriptionAttribute](http://msdn2.microsoft.com/en-us/xwb66ftt) on an enum.

 Syntax

|  |  |  |
| --- | --- | --- |
| C# | Visual Basic | Managed C++ |

**public** **static** [string](http://msdn2.microsoft.com/en-us/s1wwdcbf) GetDescription<T> (

T instance

)

 Type Parameters

T

An enum type.

 Parameters

instance (T)

The value to get the description from.

 Return Value

The [Description](http://msdn2.microsoft.com/en-us/ztwhwfdd) or the name of the instance.

 See Also

[DescriptionAttribute](http://msdn2.microsoft.com/en-us/xwb66ftt)

Solve.NET Math Expression Parser  
Solve.NET.UnitConversion Namespace

[Namespaces](#chmtopic1) > Solve.NET.UnitConversion

Contains classes used for unit conversion.

 Syntax

**namespace** Solve.NET.UnitConversion

 Types

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| All Types | Classes | Structures | Interfaces | Enumerations | Delegates |

|  |  |  |
| --- | --- | --- |
| **Icon** | **Name** | **Description** |
| public class | [LengthConverter](#chmtopic83) | Class representing length convertion. |
| public enumeration | [LengthUnit](#chmtopic85) | Units for Length |
| public class | [MassConverter](#chmtopic86) | Class representing mass convertion. |
| public enumeration | [MassUnit](#chmtopic88) | Units for Mass |
| public class | [SpeedConverter](#chmtopic89) | Class representing speed convertion. |
| public enumeration | [SpeedUnit](#chmtopic91) | Units for Speed |
| public class | [TemperatureConverter](#chmtopic92) | Class representing temperature convertion. |
| public enumeration | [TemperatureUnit](#chmtopic94) | Units for Temperature |
| public class | [TimeConverter](#chmtopic95) | Class representing time convertion. |
| public enumeration | [TimeUnit](#chmtopic97) | Units for Time |
| public enumeration | [UnitType](#chmtopic98) | The unit types available for conversion. |
| public class | [VolumeConverter](#chmtopic99) | Class representing liquid volume convertion. |
| public enumeration | [VolumeUnit](#chmtopic101) | Units for Liquid Volume |

Solve.NET Math Expression Parser  
LengthConverter Class

[Namespaces](#chmtopic1) > [Solve.NET.UnitConversion](#chmtopic82) > LengthConverter

Class representing length convertion.

 Syntax

**public** **static** **class** LengthConverter

 Members

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| All Members | Constructors | Methods | Properties | Fields | Events |
| Public Protected | | Instance Static | | Declared Inherited | |

|  |  |  |
| --- | --- | --- |
| **Icon** | **Member** | **Description** |
| static member | [Convert(LengthUnit, LengthUnit, Double)](#chmtopic84) | Converts the specified from unit to the specified unit. |

 Inheritance Hierarchy

|  |  |
| --- | --- |
| [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) | |
|  | LengthConverter |

Solve.NET Math Expression Parser  
Convert Method (fromUnit, toUnit, fromValue)

[Namespaces](#chmtopic1) > [Solve.NET.UnitConversion](#chmtopic82) > [LengthConverter](#chmtopic83) > Convert(LengthUnit, LengthUnit, Double)

Converts the specified from unit to the specified unit.

 Syntax

**public** **static** [double](http://msdn2.microsoft.com/en-us/643eft0t) Convert (

[LengthUnit](#chmtopic85) fromUnit,

[LengthUnit](#chmtopic85) toUnit,

[double](http://msdn2.microsoft.com/en-us/643eft0t) fromValue

)

 Parameters

fromUnit ([LengthUnit](#chmtopic85))

Covert from unit.

toUnit ([LengthUnit](#chmtopic85))

Covert to unit.

fromValue ([Double](http://msdn2.microsoft.com/en-us/643eft0t))

Covert from value.

 Return Value

The converted value.

Solve.NET Math Expression Parser  
LengthUnit Enumeration

[Namespaces](#chmtopic1) > [Solve.NET.UnitConversion](#chmtopic82) > LengthUnit

Units for Length

 Syntax

**public** **enum** LengthUnit

 Members

|  |  |
| --- | --- |
| **Member** | **Description** |
| Millimeter | Millimeter unit (mm) |
| Centimeter | Centimeter unit (cm) |
| Meter | Meter unit (m) |
| Kilometer | Kilometer unit (km) |
| Inch | Inch unit (in) |
| Feet | Feet unit (ft) |
| Yard | Yard unit (yd) |
| Mile | Mile unit (mile) |

Solve.NET Math Expression Parser  
MassConverter Class

[Namespaces](#chmtopic1) > [Solve.NET.UnitConversion](#chmtopic82) > MassConverter

Class representing mass convertion.

 Syntax

**public** **static** **class** MassConverter

 Members

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| All Members | Constructors | Methods | Properties | Fields | Events |
| Public Protected | | Instance Static | | Declared Inherited | |

|  |  |  |
| --- | --- | --- |
| **Icon** | **Member** | **Description** |
| static member | [Convert(MassUnit, MassUnit, Double)](#chmtopic87) | Converts the specified from unit to the specified unit. |

 Inheritance Hierarchy

|  |  |
| --- | --- |
| [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) | |
|  | MassConverter |

Solve.NET Math Expression Parser  
Convert Method (fromUnit, toUnit, fromValue)

[Namespaces](#chmtopic1) > [Solve.NET.UnitConversion](#chmtopic82) > [MassConverter](#chmtopic86) > Convert(MassUnit, MassUnit, Double)

Converts the specified from unit to the specified unit.

 Syntax

|  |  |  |
| --- | --- | --- |
| C# | Visual Basic | Managed C++ |

**public** **static** [double](http://msdn2.microsoft.com/en-us/643eft0t) Convert (

[MassUnit](#chmtopic88) fromUnit,

[MassUnit](#chmtopic88) toUnit,

[double](http://msdn2.microsoft.com/en-us/643eft0t) fromValue

)

 Parameters

fromUnit ([MassUnit](#chmtopic88))

Covert from unit.

toUnit ([MassUnit](#chmtopic88))

Covert to unit.

fromValue ([Double](http://msdn2.microsoft.com/en-us/643eft0t))

Covert from value.

 Return Value

The converted value.

Solve.NET Math Expression Parser  
MassUnit Enumeration

[Namespaces](#chmtopic1) > [Solve.NET.UnitConversion](#chmtopic82) > MassUnit

Units for Mass

 Syntax

**public** **enum** MassUnit

 Members

|  |  |
| --- | --- |
| **Member** | **Description** |
| Milligram | Milligram unit (mg) |
| Gram | Gram unit (g) |
| Kilogram | Kilogram unit (kg) |
| Ounce | Ounce unit (oz) |
| Pound | Pound unit (lb) |
| Ton | Ton unit (ton) |

Solve.NET Math Expression Parser  
SpeedConverter Class

[Namespaces](#chmtopic1) > [Solve.NET.UnitConversion](#chmtopic82) > SpeedConverter

Class representing speed convertion.

 Syntax

**public** **static** **class** SpeedConverter

 Members

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| All Members | Constructors | Methods | Properties | Fields | Events |
| Public Protected | | Instance Static | | Declared Inherited | |

|  |  |  |
| --- | --- | --- |
| **Icon** | **Member** | **Description** |
| static member | [Convert(SpeedUnit, SpeedUnit, Double)](#chmtopic90) | Converts the specified from unit to the specified unit. |

 Inheritance Hierarchy

|  |  |
| --- | --- |
| [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) | |
|  | SpeedConverter |

Solve.NET Math Expression Parser  
Convert Method (fromUnit, toUnit, fromValue)

[Namespaces](#chmtopic1) > [Solve.NET.UnitConversion](#chmtopic82) > [SpeedConverter](#chmtopic89) > Convert(SpeedUnit, SpeedUnit, Double)

Converts the specified from unit to the specified unit.

 Syntax

**public** **static** [double](http://msdn2.microsoft.com/en-us/643eft0t) Convert (

[SpeedUnit](#chmtopic91) fromUnit,

[SpeedUnit](#chmtopic91) toUnit,

[double](http://msdn2.microsoft.com/en-us/643eft0t) fromValue

)

 Parameters

fromUnit ([SpeedUnit](#chmtopic91))

Covert from unit.

toUnit ([SpeedUnit](#chmtopic91))

Covert to unit.

fromValue ([Double](http://msdn2.microsoft.com/en-us/643eft0t))

Covert from value.

 Return Value

The converted value.

Solve.NET Math Expression Parser  
SpeedUnit Enumeration

[Namespaces](#chmtopic1) > [Solve.NET.UnitConversion](#chmtopic82) > SpeedUnit

Units for Speed

 Syntax

**public** **enum** SpeedUnit

 Members

|  |  |
| --- | --- |
| **Member** | **Description** |
| MeterPerSecond | Meter/Second unit (m/s) |
| KilometerPerHour | Kilometer/Hour unit (kph) |
| FootPerSecond | Foot/Second unit (ft/s) |
| MilePerHour | Mile/Hour unit (mph) |
| Knot | Knot unit (knot) |
| Mach | Mach unit (mach) |

Solve.NET Math Expression Parser  
TemperatureConverter Class

[Namespaces](#chmtopic1) > [Solve.NET.UnitConversion](#chmtopic82) > TemperatureConverter

Class representing temperature convertion.

 Syntax

**public** **static** **class** TemperatureConverter

 Members

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| All Members | Constructors | Methods | Properties | Fields | Events |
| Public Protected | | Instance Static | | Declared Inherited | |

|  |  |  |
| --- | --- | --- |
| **Icon** | **Member** | **Description** |
| static member | [Convert(TemperatureUnit, TemperatureUnit, Double)](#chmtopic93) | Converts the specified from unit to the specified unit. |

 Inheritance Hierarchy

|  |  |
| --- | --- |
| [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) | |
|  | TemperatureConverter |

Solve.NET Math Expression Parser  
Convert Method (fromUnit, toUnit, fromValue)

[Namespaces](#chmtopic1) > [Solve.NET.UnitConversion](#chmtopic82) > [TemperatureConverter](#chmtopic92) > Convert(TemperatureUnit, TemperatureUnit, Double)

Converts the specified from unit to the specified unit.

 Syntax

**public** **static** [double](http://msdn2.microsoft.com/en-us/643eft0t) Convert (

[TemperatureUnit](#chmtopic94) fromUnit,

[TemperatureUnit](#chmtopic94) toUnit,

[double](http://msdn2.microsoft.com/en-us/643eft0t) fromValue

)

 Parameters

fromUnit ([TemperatureUnit](#chmtopic94))

Covert from unit.

toUnit ([TemperatureUnit](#chmtopic94))

Covert to unit.

fromValue ([Double](http://msdn2.microsoft.com/en-us/643eft0t))

Covert from value.

 Return Value

The converted value.

Solve.NET Math Expression Parser  
TemperatureUnit Enumeration

[Namespaces](#chmtopic1) > [Solve.NET.UnitConversion](#chmtopic82) > TemperatureUnit

Units for Temperature

 Syntax

**public** **enum** TemperatureUnit

 Members

|  |  |
| --- | --- |
| **Member** | **Description** |
| Celsius | Degrees Celsius unit (c) |
| Fahrenheit | Degrees Fahrenheit unit (f) |
| Kelvin | Degrees Kelvin unit (k) |

Solve.NET Math Expression Parser  
TimeConverter Class

[Namespaces](#chmtopic1) > [Solve.NET.UnitConversion](#chmtopic82) > TimeConverter

Class representing time convertion.

 Syntax

**public** **static** **class** TimeConverter

 Members

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| All Members | Constructors | Methods | Properties | Fields | Events |
| Public Protected | | Instance Static | | Declared Inherited | |

|  |  |  |
| --- | --- | --- |
| **Icon** | **Member** | **Description** |
| static member | [Convert(TimeUnit, TimeUnit, Double)](#chmtopic96) | Converts the specified from unit to the specified unit. |

 Inheritance Hierarchy

|  |  |
| --- | --- |
| [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) | |
|  | TimeConverter |

Solve.NET Math Expression Parser  
Convert Method (fromUnit, toUnit, fromValue)

[Namespaces](#chmtopic1) > [Solve.NET.UnitConversion](#chmtopic82) > [TimeConverter](#chmtopic95) > Convert(TimeUnit, TimeUnit, Double)

Converts the specified from unit to the specified unit.

 Syntax

**public** **static** [double](http://msdn2.microsoft.com/en-us/643eft0t) Convert (

[TimeUnit](#chmtopic97) fromUnit,

[TimeUnit](#chmtopic97) toUnit,

[double](http://msdn2.microsoft.com/en-us/643eft0t) fromValue

)

 Parameters

fromUnit ([TimeUnit](#chmtopic97))

Covert from unit.

toUnit ([TimeUnit](#chmtopic97))

Covert to unit.

fromValue ([Double](http://msdn2.microsoft.com/en-us/643eft0t))

Covert from value.

 Return Value

The converted value.

Solve.NET Math Expression Parser  
TimeUnit Enumeration

[Namespaces](#chmtopic1) > [Solve.NET.UnitConversion](#chmtopic82) > TimeUnit

Units for Time

 Syntax

**public** **enum** TimeUnit

 Members

|  |  |
| --- | --- |
| **Member** | **Description** |
| Millisecond | Millisecond unit (ms) |
| Second | Second unit (sec) |
| Minute | Minute unit (min) |
| Hour | Hour unit (hr) |
| Day | Day unit (d) |
| Week | Week unit (wk) |

Solve.NET Math Expression Parser  
UnitType Enumeration

[Namespaces](#chmtopic1) > [Solve.NET.UnitConversion](#chmtopic82) > UnitType

The unit types available for conversion.

 Syntax

**public** **enum** UnitType

 Members

|  |  |
| --- | --- |
| **Member** | **Description** |
| Length | Length unit types. |
| Mass | Mass unit types. |
| Speed | Speed unit types. |
| Temperature | Temperature unit types. |
| Time | Time unit types. |
| Volume | Volume unit types. |

Solve.NET Math Expression Parser  
VolumeConverter Class

[Namespaces](#chmtopic1) > [Solve.NET.UnitConversion](#chmtopic82) > VolumeConverter

Class representing liquid volume convertion.

 Syntax

**public** **static** **class** VolumeConverter

 Members

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| All Members | Constructors | Methods | Properties | Fields | Events |
| Public Protected | | Instance Static | | Declared Inherited | |

|  |  |  |
| --- | --- | --- |
| **Icon** | **Member** | **Description** |
| static member | [Convert(VolumeUnit, VolumeUnit, Double)](#chmtopic100) | Converts the specified from unit to the specified unit. |

 Inheritance Hierarchy

|  |  |
| --- | --- |
| [Object](http://msdn2.microsoft.com/en-us/e5kfa45b) | |
|  | VolumeConverter |

Solve.NET Math Expression Parser  
Convert Method (fromUnit, toUnit, fromValue)

[Namespaces](#chmtopic1) > [Solve.NET.UnitConversion](#chmtopic82) > [VolumeConverter](#chmtopic99) > Convert(VolumeUnit, VolumeUnit, Double)

Converts the specified from unit to the specified unit.

 Syntax

**public** **static** [double](http://msdn2.microsoft.com/en-us/643eft0t) Convert (

[VolumeUnit](#chmtopic101) fromUnit,

[VolumeUnit](#chmtopic101) toUnit,

[double](http://msdn2.microsoft.com/en-us/643eft0t) fromValue

)

 Parameters

fromUnit ([VolumeUnit](#chmtopic101))

Covert from unit.

toUnit ([VolumeUnit](#chmtopic101))

Covert to unit.

fromValue ([Double](http://msdn2.microsoft.com/en-us/643eft0t))

Covert from value.

 Return Value

The converted value.

Solve.NET Math Expression Parser  
VolumeUnit Enumeration

[Namespaces](#chmtopic1) > [Solve.NET.UnitConversion](#chmtopic82) > VolumeUnit

Units for Liquid Volume

 Syntax

**public** **enum** VolumeUnit

 Members

|  |  |
| --- | --- |
| **Member** | **Description** |
| Milliliter | Milliliter unit (ml) |
| Liter | Liter unit (l) |
| Kiloliter | Kiloliter unit (kl) |
| FluidOunce | Fluid ounce unit (oz) |
| Cup | Cup unit (cup) |
| Pint | Pint unit (pt) |
| Quart | Quart unit (qt) |
| Gallon | Gallon unit (gal) |