

System.ArithmeticException Class

```
[ILASM]
.class public serializable ArithmeticException extends
System.SystemException

[C#]
public class ArithmeticException: SystemException
```

Assembly Info:

- *Name:* mscorlib
- *Public Key:* [00 00 00 00 00 00 00 00 04 00 00 00 00 00 00]
- *Version:* 1.0.x.x
- *Attributes:*
 - CLSCompliantAttribute(true)

Summary

Represents an error caused by an arithmetic operation.

Inherits From: System.SystemException

Library: BCL

Thread Safety: All public static members of this type are safe for multithreaded operations. No instance members are guaranteed to be thread safe.

Description

[Note: The Base Class Library includes two types derived from **System.ArithmeticException**:

- **System.DivideByZeroException**
- **System.OverflowException**

When appropriate, use these types instead of **System.ArithmeticException**.]

[Note: The following IL instructions throw **System.ArithmeticException**:

- ckfinite
- div

1]

2 **Example**

3

4 The following example demonstrates an error that causes the system
5 to throw a **System.ArithmeticException** error.

6

7 [C#]

```
8       using System;
9       class testNan {
10       public static void Main() {
11       double myNan = Double.NaN;
12       try {
13       Math.Sign(myNan);
14       }
15       catch (ArithmeticException e) {
16       Console.WriteLine("Error: {0}",e);
17       }
18       }
19       }
20
```

21 The output is

22

23 Error: System.ArithmeticException: Function does not accept
24 floating point Not-a-Number values.

25

26

27 at System.Math.Sign(Double value)

28

29

30 at testNan.Main()

31

32

1 **ArithmeticException()** Constructor

```
2        [ILASM]  
3        public rtspecialname specialname instance void .ctor()  
  
4        [C#]  
5        public ArithmeticException()
```

6 **Summary**

7 Constructs and initializes a new instance of the
8 **System.ArithmeticException** class.

9 **Description**

10 This constructor initializes the
11 **System.ArithmeticException.Message** property of the new instance
12 to a system-supplied message that describes the error, such as "The
13 arithmetic operation is not allowed." This message takes into account
14 the current system culture.

15
16 The **System.ArithmeticException.InnerException** property is
17 initialized to **null**.

18

ArithmeticException(System.String)

Constructor

```
[ILASM]
public rtspecialname specialname instance void .ctor(string
message)

[C#]
public ArithmeticException(string message)
```

Summary

Constructs and initializes a new instance of the **System.ArithmeticException** class.

Parameters

Parameter	Description
<i>message</i>	A System.String that describes the error. The content of <i>message</i> is intended to be understood by humans. The caller of this constructor is required to ensure that this string has been localized for the current system culture.

Description

This constructor initializes the **System.ArithmeticException.Message** property of the new instance using *message*. If *message* is **null**, the **System.ArithmeticException.Message** property is initialized to the system-supplied message provided by the constructor that takes no arguments. The **System.ArithmeticException.InnerException** property is initialized to **null**.

ArithmeticException(System.String, System.Exception) Constructor

```
[ILASM]
public rtspecialname specialname instance void .ctor(string
message, class System.Exception innerException)

[C#]
public ArithmeticException(string message, Exception
innerException)
```

Summary

Constructs and initializes a new instance of the **System.ArithmeticException** class.

Parameters

Parameter	Description
<i>message</i>	A System.String that describes the error. The content of <i>message</i> is intended to be understood by humans. The caller of this constructor is required to ensure that this string has been localized for the current system culture.
<i>innerException</i>	An instance of System.Exception that is the cause of the current exception. If <i>innerException</i> is non-null, then the current exception was raised in a catch block handling <i>innerException</i> .

Description

This constructor initializes the **System.ArithmeticException.Message** property of the new instance using *message*, and the **System.Exception.InnerException** property using *innerException*. If *message* is **null**, the **System.ArithmeticException.Message** property is initialized to the system-supplied message provided by the constructor that takes no arguments.

[Note: For information on inner exceptions, see **System.Exception.InnerException**.]