

1 System.ArithmeticException Class

2
3

```
4 [ILASM]  
5 .class public serializable ArithmeticException extends  
6 System.SystemException  
  
7 [C#]  
8 public class ArithmeticException: SystemException
```

9 Assembly Info:

- 10 • Name: mscorlib
- 11 • Public Key: [00 00 00 00 00 00 00 00 04 00 00 00 00 00 00]
- 12 • Version: 1.0.x.x
- 13 • Attributes:
 - 14 ○ CLSCompliantAttribute(true)

15 Summary

16

17 Represents an error caused by an arithmetic operation.

18 Inherits From: System.SystemException

19

20 Library: BCL

21

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

24

25 Description

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

- 28 • **System.DivideByZeroException**
- 29 • **System.OverflowException**

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

32

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

- 35 • ckfinite
- 36 • 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  
floating point Not-a-Number values.
```

24

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

1 ArithmeticException(System.String)

2 Constructor

```
3 [ILASM]  
4 public rtspecialname specialname instance void .ctor(string  
5 message)  
  
6 [C#]  
7 public ArithmeticException(string message)
```

8 Summary

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

11 Parameters

12
13

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.

14

15 Description

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

23

1 ArithmeticException(System.String, 2 System.Exception) Constructor

```
3 [ILASM]  
4 public rtspecialname specialname instance void .ctor(string  
5 message, class System.Exception innerException)  
  
6 [C#]  
7 public ArithmeticException(string message, Exception  
8 innerException)
```

9 Summary

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

12 Parameters

13
14

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> .

15

16 Description

17 This constructor initializes the
18 **System.ArithmeticException.Message** property of the new instance
19 using *message*, and the **System.Exception.InnerException** property
20 using *innerException*. If *message* is **null**, the
21 **System.ArithmeticException.Message** property is initialized to the
22 system-supplied message provided by the constructor that takes no
23 arguments.
24

25 [Note: For information on inner exceptions, see
26 **System.Exception.InnerException**.]
27