

Forum:[Hack Forums](#)

Thread: [The sinus function on a calculator, how to do in VB?](#)

AngularJS - October 26, 2014, 7:27 am

Hey guys,

I am bussy with a project for school and I want to make it a little bit easier by making a program that automatically calculates angles, but I need to know how I use SINUS (Sin button on calculator) in VB.

Someone maybe has an example code for me?

Thanks in advance!

sqsgkrldwg - October 26, 2014, 7:31 am

Hi,

Here is the function, thanks Google :

```
PHP Code
<?php
Public Shared Function Sin ( _
    a As Double _
) As Double
```

a is in rad. So if you have deg first, you must do $x \cdot \pi / 180$? to convert x into rad.

Here is a wonderful link, thanks Google : <http://en.wikipedia.org/wiki/Sine>

Example took from MSDN, thanks Google :

Code ' Example for the trigonometric Math.Sin(Double) and Math.Cos(Double) methods.

Imports System

Imports Microsoft.VisualBasic

Module SinCos

```
Sub Main()
    Console.WriteLine( _
        "This example of trigonometric " & _
        "Math.Sin( double ) and Math.Cos( double )" & vbCrLf & _
        "generates the following output." & vbCrLf)
    Console.WriteLine( _
        "Convert selected values for X to radians " & vbCrLf & _
        "and evaluate these trigonometric identities:")
    Console.WriteLine( _
        "  sin^2(X) + cos^2(X) = 1" & vbCrLf & _
        "  sin(2 * X) = 2 * sin(X) * cos(X)" & _
        Console.WriteLine("  cos(2 * X) = cos^2(X) - sin^2(X)"))
```

```
UseSineCosine(15.0)
UseSineCosine(30.0)
UseSineCosine(45.0)
```

```
Console.WriteLine( _
vbCrLf & "Convert selected values for X and Y to radians" & _
vbCrLf & "and evaluate these trigonometric identities:")
Console.WriteLine("  sin(X + Y) = sin(X) * cos(Y) + cos(X) * sin(Y)")
Console.WriteLine("  cos(X + Y) = cos(X) * cos(Y) - sin(X) * sin(Y)")
```

```
UseTwoAngles(15.0, 30.0)
UseTwoAngles(30.0, 45.0)
End Sub 'Main
```

```
' Evaluate trigonometric identities with a given angle.
Sub UseSineCosine(degrees As Double)
```

```
Dim angle As Double = Math.PI * degrees / 180.0
Dim sinAngle As Double = Math.Sin(angle)
Dim cosAngle As Double = Math.Cos(angle)
```

```
' Evaluate sin^2(X) + cos^2(X) = 1.
Console.WriteLine( _
vbCrLf & "    Math.Sin({0} deg) = {1:E16}" & _
vbCrLf & "    Math.Cos({0} deg) = {2:E16}", _
degrees, Math.Sin(angle), Math.Cos(angle))
Console.WriteLine( _
"(Math.Sin({0} deg))^2 + (Math.Cos({0} deg))^2 = {1:E16}", _
degrees, sinAngle * sinAngle + cosAngle * cosAngle)
```

```
' Evaluate sin(2 * X) = 2 * sin(X) * cos(X).
Console.WriteLine( _
"    Math.Sin({0} deg) = {1:E16}", _
2.0 * degrees, Math.Sin(2.0 * angle))
Console.WriteLine( _
"    2 * Math.Sin({0} deg) * Math.Cos({0} deg) = {1:E16}", _
degrees, 2.0 * sinAngle * cosAngle)
```

```
' Evaluate cos(2 * X) = cos^2(X) - sin^2(X).
Console.WriteLine( _
"    Math.Cos({0} deg) = {1:E16}", _
2.0 * degrees, Math.Cos(2.0 * angle))
Console.WriteLine( _
"(Math.Cos({0} deg))^2 - (Math.Sin({0} deg))^2 = {1:E16}", _
degrees, cosAngle * cosAngle - sinAngle * sinAngle)
```

```
End Sub 'UseSineCosine
```

```
' Evaluate trigonometric identities that are functions of two angles.
Sub UseTwoAngles(degreesX As Double, degreesY As Double)
```

```
Dim angleX As Double = Math.PI * degreesX / 180.0
```

```
Dim angleY As Double = Math.PI * degreesY / 180.0
```

```
' Evaluate  $\sin(X + Y) = \sin(X) * \cos(Y) + \cos(X) * \sin(Y)$ .
```

```
Console.WriteLine( _  
vbCrLf & "    Math.Sin({0} deg) * Math.Cos({1} deg) +" & _  
vbCrLf & "    Math.Cos({0} deg) * Math.Sin({1} deg) = {2:E16}", _  
degreesX, degreesY, Math.Sin(angleX) * Math.Cos(angleY) + _  
Math.Cos(angleX) * Math.Sin(angleY))  
Console.WriteLine( _  
"    Math.Sin({0} deg) = {1:E16}", _  
degreesX + degreesY, Math.Sin(angleX + angleY))
```

```
' Evaluate  $\cos(X + Y) = \cos(X) * \cos(Y) - \sin(X) * \sin(Y)$ .
```

```
Console.WriteLine( _  
"    Math.Cos({0} deg) * Math.Cos({1} deg) -" & vbCrLf & _  
"    Math.Sin({0} deg) * Math.Sin({1} deg) = {2:E16}", _  
degreesX, degreesY, Math.Cos(angleX) * Math.Cos(angleY) - _  
Math.Sin(angleX) * Math.Sin(angleY))  
Console.WriteLine( _  
"    Math.Cos({0} deg) = {1:E16}", _  
degreesX + degreesY, Math.Cos(angleX + angleY))
```

```
End Sub 'UseTwoAngles
```

```
End Module 'SinCos
```

```
' This example of trigonometric Math.Sin( double ) and Math.Cos( double )  
' generates the following output.
```

```
' Convert selected values for X to radians  
' and evaluate these trigonometric identities:
```

```
'  $\sin^2(X) + \cos^2(X) = 1$   
'  $\sin(2 * X) = 2 * \sin(X) * \cos(X)$   
'  $\cos(2 * X) = \cos^2(X) - \sin^2(X)$   
,  
'    Math.Sin(15 deg) = 2.5881904510252074E-001  
'    Math.Cos(15 deg) = 9.6592582628906831E-001  
' (Math.Sin(15 deg))^2 + (Math.Cos(15 deg))^2 = 1.000000E+000  
'    Math.Sin(30 deg) = 4.9999994E-001  
'    2 * Math.Sin(15 deg) * Math.Cos(15 deg) = 4.9999994E-001  
'    Math.Cos(30 deg) = 8.6602540378443871E-001  
' (Math.Cos(15 deg))^2 - (Math.Sin(15 deg))^2 = 8.6602540378443871E-001  
,  
'    Math.Sin(30 deg) = 4.9999994E-001  
'    Math.Cos(30 deg) = 8.6602540378443871E-001  
' (Math.Sin(30 deg))^2 + (Math.Cos(30 deg))^2 = 1.000000E+000  
'    Math.Sin(60 deg) = 8.6602540378443860E-001  
'    2 * Math.Sin(30 deg) * Math.Cos(30 deg) = 8.6602540378443860E-001  
'    Math.Cos(60 deg) = 5.00000011E-001  
' (Math.Cos(30 deg))^2 - (Math.Sin(30 deg))^2 = 5.00000022E-001  
,  
'    Math.Sin(45 deg) = 7.0710678118654746E-001  
'    Math.Cos(45 deg) = 7.0710678118654757E-001  
' (Math.Sin(45 deg))^2 + (Math.Cos(45 deg))^2 = 1.000000E+000
```

```
' Math.Sin(90 deg) = 1.000000E+000
' 2 * Math.Sin(45 deg) * Math.Cos(45 deg) = 1.000000E+000
' Math.Cos(90 deg) = 6.1230317691118863E-017
' (Math.Cos(45 deg))^2 - (Math.Sin(45 deg))^2 = 2.2204460492503131E-016
'
' Convert selected values for X and Y to radians
' and evaluate these trigonometric identities:
' sin(X + Y) = sin(X) * cos(Y) + cos(X) * sin(Y)
' cos(X + Y) = cos(X) * cos(Y) - sin(X) * sin(Y)
'
' Math.Sin(15 deg) * Math.Cos(30 deg) +
' Math.Cos(15 deg) * Math.Sin(30 deg) = 7.0710678118654746E-001
' Math.Sin(45 deg) = 7.0710678118654746E-001
' Math.Cos(15 deg) * Math.Cos(30 deg) -
' Math.Sin(15 deg) * Math.Sin(30 deg) = 7.0710678118654757E-001
' Math.Cos(45 deg) = 7.0710678118654757E-001
'
' Math.Sin(30 deg) * Math.Cos(45 deg) +
' Math.Cos(30 deg) * Math.Sin(45 deg) = 9.6592582628906831E-001
' Math.Sin(75 deg) = 9.6592582628906820E-001
' Math.Cos(30 deg) * Math.Cos(45 deg) -
' Math.Sin(30 deg) * Math.Sin(45 deg) = 2.5881904510252085E-001
' Math.Cos(75 deg) = 2.5881904510252096E-001
```

Dialog - October 26, 2014, 7:33 am

Just call the static Sin method in the Math class.

```
Math.Sin(15.0)
```

AngularJS - October 26, 2014, 7:34 am

(Oct 26, 2014 07:33 AM)Dialog Wrote: [\[CITE\]](#) Just call the static Sin method in the Math class.

```
Math.Sin(15.0)
```

15.0, does that just mean the angle is 15 degree?

sqsgkrldhwg - October 26, 2014, 7:38 am

(Oct 26, 2014 07:34 AM)XAnacondaX Wrote: [\[CITE\]](#) 15.0, does that just mean the angle is 15 degree?

Just read my post carefully ...

<https://hackforums.net/showthread.php?tid=4508085&pid=43027175#pid43027175>

Dialog - October 26, 2014, 7:40 am

(Oct 26, 2014 07:34 AM)XAnacondaX Wrote: [\[CITE\]](#) 15.0, does that just mean the angle is 15 degree?

Yes. Taken from MSDN:

<http://msdn.microsoft.com/en-us/library/system.math.sin%28v=vs.110%29.aspx>

AngularJS - October 26, 2014, 7:42 am

(Oct 26, 2014 07:40 AM)Dialog Wrote: [\[CITE\]](#) Yes. Taken from MSDN:

<http://msdn.microsoft.com/en-us/library/system.math.sin%28v=vs.110%29.aspx>The thing is, when I put sin(15.0) in there, the outcome is 0,650

If I put it in my casio calculator it gives 0,259

sqsgkrldwg - October 26, 2014, 7:44 am

(Oct 26, 2014 07:42 AM)XAnacondaX Wrote: [\[CITE\]](#) The thing is, when I put sin(15.0) in there, the outcome is 0,650

If I put it in my casio calculator it gives 0,259

That's because degree is not the same thing as radians ... Dialog seems to be tired ...

AngularJS - October 26, 2014, 7:45 am

(Oct 26, 2014 07:44 AM)L-EARN Wrote: [\[CITE\]](#) That's because degree is not the same thing as radians ... Dialog seems to be tired ...

Oh, and is it impossible to get it to degrees?

sqsgkrldwg - October 26, 2014, 7:47 am

(Oct 26, 2014 07:45 AM)XAnacondaX Wrote: [\[CITE\]](#) Oh, and is it impossible to get it to degrees?

You can do it. Just read this post.

<https://hackforums.net/showthread.php?tid=4508085&pid=43027258#pid43027258>

Cornflower Blue ???-?— - October 26, 2014, 7:48 am

You can convert rad to deg like this

$$\text{deg} = \text{PI} * \text{rad} / 180.0$$

Dialog - October 26, 2014, 7:49 am

(Oct 26, 2014 07:45 AM)XAnacondaX Wrote: [\[CITE\]](#) Oh, and is it impossible to get it to degrees?

L-EARN is correct. You'd have to multiply degrees by Math.PI divided by 180.

AngularJS - October 26, 2014, 7:57 am

So it will be like this?

```
Code Dim rad As Integer
    Dim deg As Integer
    rad = Math.Sin(15.0)
    deg = Math.PI * rad / 180.0
```

Cornflower Blue ???-?— - October 26, 2014, 8:03 am

(Oct 26, 2014 07:57 AM)XAnacondaX Wrote: [\[CITE\]](#) So it will be like this?

```
Code Dim rad As Integer
    Dim deg As Integer
    rad = Math.Sin(15.0)
    deg = Math.PI * rad / 180.0
```

I think you need to listen more in Maths class, this is simple math and you are getting it all wrong.

sqsgkrldwg - October 26, 2014, 8:04 am

(Oct 26, 2014 07:57 AM)XAnacondaX Wrote: [\[CITE\]](#) So it will be like this?

```
Code Dim rad As Integer
    Dim deg As Integer
```

```
rad = Math.Sin(15.0)
deg = Math.PI * rad / 180.0
```

No.

```
Code Dim rad As Double
    Dim deg As Double
Dim sin As Double
    deg = 15.0
    rad = Math.PI * deg / 180.0
    sin = Math.Sin(rad)
```

Cornflower Blue ???-? — - October 26, 2014, 8:07 am

(Oct 26, 2014 08:04 AM)L-EARN Wrote: [\[CITE\]](#) No.

```
Code Dim rad As Double
    Dim deg As Double
Dim sin As Double
    deg = 15.0
    rad = Math.PI * deg / 180.0
    sin = Math.Sin(rad)
```

Wrong, to convert deg to rad you do this
 $\text{rad} = (\text{Math.PI} / 180) * \text{deg};$

Did any of you study in school?

sqsgkrldwg - October 26, 2014, 8:10 am

(Oct 26, 2014 08:07 AM)Cornflower Blue ???-?— Wrote: [\[CITE\]](#) Wrong, to convert deg to rad you do this

```
rad = (Math.PI / 180) deg;
```

Did any of you study in school?
Hahaha. This is THE SAME THING.

$(\text{Math.PI} / 180) \text{ deg}$
Is the same thing as :

$(\text{Math.PI} \text{ deg}) / 180$

And no, I do not study at school anymore. I'm too genius for them ...

This thread is a f**** joke ...

Cornflower Blue ???-? — - October 26, 2014, 8:15 am

(Oct 26, 2014 08:10 AM)L-EARN Wrote: [\[CITE\]](#) Hahaha. This is THE SAME THING.

$(\text{Math.PI} / 180) \text{ deg}$
Is the same thing as :

$(\text{Math.PI} \text{ deg}) / 180$

This thread is a f***** joke ...

" $(\text{Math.PI} / 180) * \text{val}$ " is how I always do it and how everybody I know does it, I didn't even read your post, just saw it wasn't the clean/my way of doing it, so I assumed it was wrong

Your way does work, sorry for not reading I guess xD