

Re: How to Integer to degree,minute,second conversion...

Source: <http://sci.tech-archive.net/Archive/sci.geo.satellite-nav/2004-10/1536.html>

From: David L. Wilson (dwilson314_at_adelphia.net)

Date: 10/29/04

Date: Fri, 29 Oct 2004 07:16:36 -0400

"Mujtaba" <tomujtaba@hotmail.com> wrote in message
news:8f4f92aa.0410282304.555bff38@posting.google.com...

> *Simple is that i want to convert integer(not decimal) to degree,
> minute, second. Could anybody plz help me out. Any formula or metho*

See below:

From: David L. Wilson (dwilson314@adelphia.net)

Subject: Re: Decimal to DM Conversion

Newsgroups: sci.geo.satellite-nav

Date: 2003-04-28 03:39:47 PST

"Les Wilson" <nessman@rochester.rr.com> wrote in message
news:pw1ra.56953\$5f4.40935@twister.nyroc.rr.com...

> *I forgot where I found it or who wrote it - but there's a Degree / Minute
> /*

> *Second converter that you can download from the net. It's freeware.*

It is at:

<http://www.mentorsoftwareinc.com/FREEBIE/FREE1198.HTM>

Below is something I once posted here...

To convert Degrees-Minutes-Seconds (DMS) to decimal degrees (dd.ddddd),

$$dd.ddddd = D + M/60 + S/3600$$

To convert decimal degrees (dd.ddddd) to Degree-Minutes-Seconds (DMS),

D = int(dd.ddddd) int = the integer or whole number part (the part in
front of the decimal

$$M = \text{int}((dd.ddddd - D)*60)$$

$$S = (dd.ddddd - (D + M/60)) * 3600$$

To convert degrees–decimal minutes (Dmm.mmm) to decimal degrees (dd.ddddd),

$$dd.ddddd = D + mm.mmm/60$$

To convert decimal degrees (dd.ddddd) to degrees–decimal minutes (Dmm.mmm),

$$D = \text{int}(dd.ddddd)$$

$$mm.mmm = (dd.ddddd - D) * 60$$

To convert degrees–decimal minutes (Dmm.mmm) to Degrees–Minutes–Seconds (DMS),

$$D = D$$

$$M = \text{int}(mm.mmm)$$

$$S = (mm.mmm - M) * 60$$

To convert Degrees–Minutes–Seconds (DMS) to degrees–decimal minutes (Dmm.mmm)

$$D = D$$

$$mm.mmm = M + S/60$$

If you are going to do a calculation that involves trigonometric functions of latitude or longitude on a calculator, be sure that it is in degree mode and use decimal degrees. If in radians mode, you need to convert decimal degrees into radians by multiplying by $\pi/180$ (which is about 0.01745329, that should be accurate enough) before entering the number into the calculator.