[HMS+] and [HMS–] are functions that are found in your calculator. Special versions of these functions that "tag" the resulting number as "HMS:" have been included in your custom "CST." menu.

[HMS+] and [HMS–] can only be used with angles entered as degrees, minutes, and seconds without changing said angles into decimal degrees. Before performing any function other than addition or subtraction (e.g.: [×], [÷], [SIN], [COS], [TAN], etc.) angles must be converted into decimal degrees.

Example 1: 25° 30' 30"
+45° 30' 30"

(keystrokes): 25.3030 [ENTER] 45.3030 [HMS+].
(display will read): 71.0100
(which is read): 71° 01' 00"

Example 2: 75° 15' 15"
–30° 20' 10"

(keystrokes): 75.1515 [ENTER] 30.2010 [HMS–].
(display will read): 44.5505
(which is read): 44° 55' 05"

[HMS+] and [HMS–] can be combined, such as in the following example:

Example 3: 115° 28' 34"
+264° 52' 45"
–360° 00' 00"

(keystrokes): 115.2834 [ENTER] 264.5245 [HMS+] 360 [HMS–].
(display will read): 20.2119
(which is read): 20° 21' 19"

Perform the following calculations using [ HMS+ ] and/or [ HMS– ].

1) 54° 35' 24" + 86° 59' 44"

2) 112° 24' 15" + 101° 22' 47"

3) 13° 55' 42" + 99° 51' 19"

4) 176° 45' 28" – 52° 47' 34"

5) 47° 39' 25" – 47° 38' 47"

6) 116° 16' 16" – 90° 12' 12"

7) 234° 45' 56" + 102° 14' 52" – 144° 32' 23"

8) 10° 33' 56" + 97° 55' 40" – 88° 45' 28"

9) 112° 52' 18" + 349° 49' 50" – 272° 51' 51"

10) 352° 58' 21" – 272° 02' 53" + 141° 57' 14" – 132° 52' 42"

11) 36° 52' 11" – 44° 56' 54" + 19° 26' 27" – 0° 10' 33"

12) 77° 53' 43" – 33° 33' 33" – 41° 33' 55" – 2° 46' 15"

The following operations may require you to use decimal degrees for specific steps in the solution. Use [ HMS+ ] and [ HMS– ] whenever possible, and shift to decimal degrees only when absolutely necessary.

13) $\frac{197° 34' 55" + 197° 34' 47" + 197° 35' 05"}{3}$ =

14) $\frac{47° 57' 33" - 106° 55' 19" + 64° 03' 07"}{7}$ =

15) $\frac{255° 56' 45" + 316° 35' 35" + 198° 53' 54" - 47° 42' 16" + 356° 16' 02"}{3}$ =

***Be very careful on this one !! …***

16) $\frac{(50')\ (40')\ \sin(14° 12' 11" + 9° 26' 39" + 13° 13' 22")}{2}$ = ***sq.ft.***