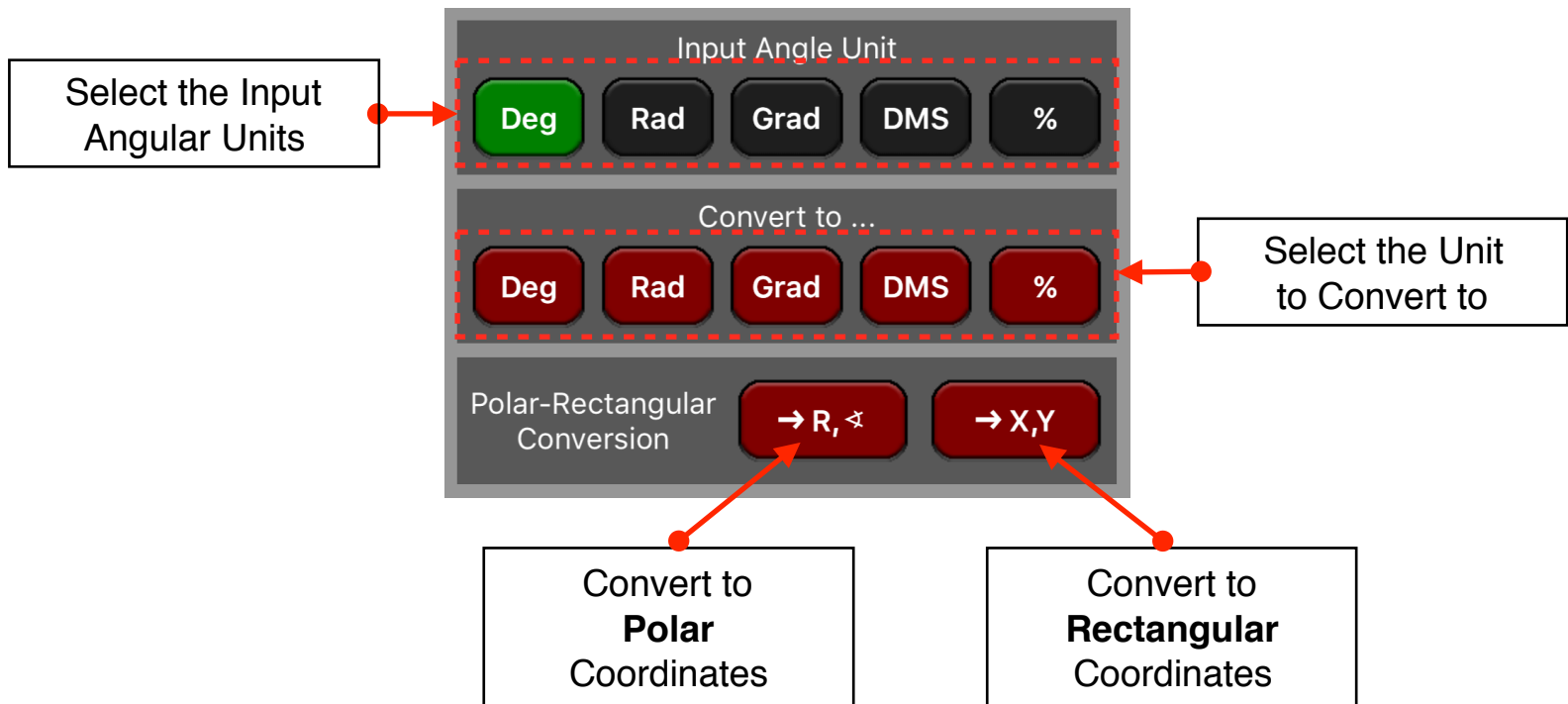


Angles & Polar Conversions Tool

This tool implements an angular conversion expansion to the math functions included in the original HP-11C calculator. To show it, press the **OPT** key, touch the “**Scientific**” or “**Convert**” menu button, and select the “**Angles & Polar**” tool.



Touch any of the “Angle Unit” buttons to assign the selected unit to the displayed number (stack-X), then touch any of the “Convert To...” buttons to perform the conversion to the selected unit. When the conversion is performed, the “Angle Unit” is updated to indicate the resulting angular unit.

Also a Polar-Rectangular conversion are added where the polar angle is interpreted in the “Angle Unit” setting.

The following examples assumes the “Angles & Polar” tool is already visible in the calculator.

Example 1: Convert 88° 57' 23.45" to decimal degrees.

Keystrokes	Description
Type 88.572345 & [DMS]	Type the value to convert and set the Angular unit to Degrees.
[Deg]	Convert to decimal Degrees. Result = 88.9565

Example 2: Convert 23.5 Degrees to Radians, gradians and Degree-Minutes-Seconds.

Keystrokes	Description
Type 23.5 & [Deg]	Type the value to convert and set the Angular unit to Degrees.
[Rad]	Convert to Radians. Result = 0.4102
[Grad]	Convert to Gradians. Result = 26.1111
[%]	Convert to slope percent. Result = 43.4812
[DMS]	Convert to D.MMSS format. Result = 23.3000 (23 degrees, 30 minutes and 0 seconds).

Example 3: Convert " $\pi / 3$ " Radians to Degree-Minute-Second Format.

Keystrokes (RPN mode)	Description
Type "180" & [Deg] [Rad] "3" [\div]	Set Angular unit to Degrees, type 180, convert to radians and divide by 3. Result = 1.0472 ($\pi / 3$ radians).
[DMS]	Convert to D.MMSS format. Result = 60.00 (60 degrees, 0 minutes and 0 seconds).

Example 4: Convert the rectangular coordinate (10.0, 5.0) to polar coordinates. Express the angular result in Degrees.

Keystrokes	Description
Type "5" [ENTER] "10"	Type the Y-coordinate touch Enter and type the X-coordinate
[Deg]	Set the Angular unit to Degrees.
[▶ R,↔]	Convert to Polar. Result = 11.1803 (Radius)
[X↔Y]	Result = 26.5651 (Angle in Degrees)

Example 5: Convert the polar coordinate (12.0 , ∠30.0°) to rectangular coordinates.

Keystrokes	Description
Type "30" [ENTER] "12"	Type the Angular-coordinate touch Enter and type the Radius-coordinate.
[Deg]	Set the Angular unit to Degrees.
[▶ X,Y]	Convert to Rectangular. Result = 10.3923 (X-coordinate).
[X↔Y]	Result = 6.00 (Y-coordinate).