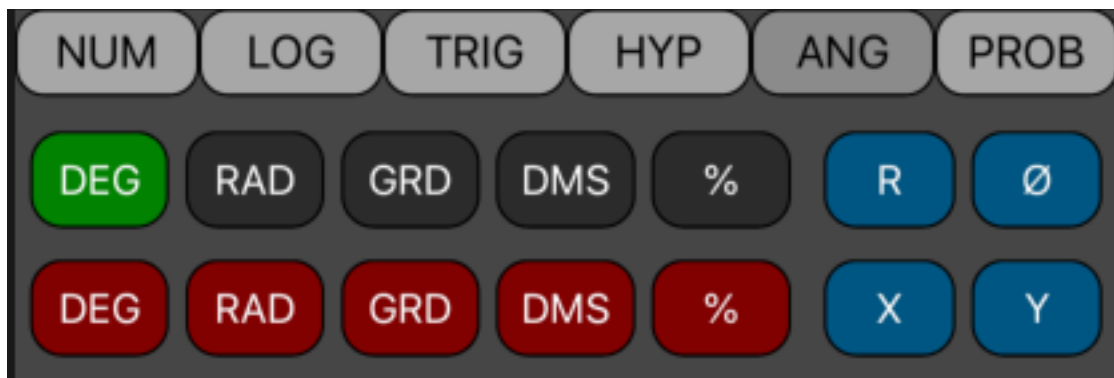


Angles & Polar Conversions Menu

This menu allows to convert angles and coordinates. To show it, touch the “**MATH**” button in the main menu and select the “**ANG**” tab or touch **[Shift] [ANGL]** in the keyboard.



Key	Action
[DEG] [RAD] [GRD] [DMS] [%]	Touch to set the angular unit of the displayed number to Decimal Degrees, Radians, Gradians, Degree-Mnute-Seconds or Slope Percent.
[DEG] [RAD] [GRD] [DMS] [%]	Touch to convert the displayed number from the current angular unit to Decimal Degrees, Radians, Gradians, Degree-Mnute-Seconds or Slope Percent. Also updates the current unit.
[R] [Ø] [X] [Y]	Stores or calculates the Polar (R, Ø) or Rectangular (X,Y) coordinates.

Note: In the Polar-Rectangular conversion, the polar angle is interpreted in the current angle unit.

Example 1:

Convert $88^{\circ} 57' 23.45''$ to decimal degrees.

Solution :

Keystrokes	Description
Select [DMS] as Input unit	Set the input angle unit to Degree-Mnute-Seconds.
Type 88.572345	Type the DMS angle.
Touch convert to [DEG]	Convert to Decimal Degrees. Result = 88.9565

Example 2:

Convert 23.5 Degrees to Radians, gradians, slope percent and Degree-Minutes-Seconds.

Solution :

Keystrokes	Description
23.5 [DEG]	Input the value to convert and set Degrees (DEG).
[RAD]	Convert to Radians. Result = 0.4102
[GRD]	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.

Solution :

Keystrokes (ALG mode)	Description
180 [DEG] [RAD] [÷] 3 [=]	Type 180 and set Degrees, 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.

Solution :

Keystrokes	Description
10 [X]	Input the X-coordinate. X = 10.0000.
5 [Y]	Input the Y-coordinate. Y = 5.0000
[DEG]	Set the angular unit to Degrees.
[R]	Calculate the radius. R = 11.1803 (Radius)
[∅]	Calculate the angle. ∅ = 26.5651 (Degrees)

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

Solution :

Keystrokes	Description
12 [R]	Input the radius. R = 12.0000
30 [DEG] [∅]	Input the angle and set angular unit to Degrees. ∅ = 30.0000
[X]	Calculate the X-coordinate. X = 10.3923
[Y]	Calculate the Y-coordinate. Y = 6.0000