

Chapter 6 / Example 5


Converting between degrees and radians

The GDC will convert angles quickly from one measure to another.

- a** Convert 20° to radians. **b** Convert 56.5° to radians. **c** Convert $\frac{4\pi}{3}$ to degrees.

Press **MENU** 1 **RUN-MAT** to display the Run-Matrix screen for arithmetical calculations.

Press **SHIFT** **MENU** (SETUP).

Scroll down using  to Angle and change the setting to **F2** Rad.

Press **EXIT**.

Input/Output: Math
 Mode : Comp
 Frac Result : d/c
 Func Type : Y=
 Draw Type : Connect
 Derivative : Off
 Angle : Rad
 Math Line

Type 20.

Press **OPTN** **F6** \triangleright **F5** ANGLE **F1** 0.

Press **[EXE]**.



The GDC displays the angle, in radians, as a multiple of π .

$$20^\circ = \frac{\pi}{9}$$

20°

$\frac{1}{9}\pi$

☐

o r g 0.933  

To find this value as a decimal.

Press

$$20^\circ = 0.349.$$

20°

0.3490658504

☐

0 1 2 3 4 5 6 7 8 9

0.333

Type 56.5

Press **F1** 0.

Press **EXE**.

$$\frac{113}{360}\pi$$

To find this value as a decimal.

Press  

$$56.5^\circ \approx 0.986$$

20° 0.3490658504
56.5° 0.9861110274
□

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Press **SHIFT** **MENU** (SETUP).

Scroll down using **▼** to Angle and change the setting to **F1** Deg.

Press **EXIT**.

```
Input/Output:Math
Mode          :Comp
Frac Result   :d/c
Func Type     :Y=
Draw Type     :Connect
Derivative    :Off
Angle         :Deg
Deg Rad Gra
```

Press **□** to add a fraction template.

Type 4 press **SHIFT** **x10^x** (π) in the numerator and type 3 in the denominator.

Press **▶** **□**.

Press **OPTN** **F6** **▶** **F5** ANGLE **F2** r.

Press **EXE**.

$$\frac{4\pi}{3} = 240^\circ.$$

```
0.3490658504
56.5°
0.9861110274
4πr
3
240
□
° r g ° ' " 1/33 ▶
```