

Chapter 12 / Example 1

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 **[mode]**.

Use the **[◀]** **[▶]** **[▶]** **[▶]** keys to place the cursor on Radian in the Mode menu, and then press **[enter]** to highlight it.

Press **[2nd]** **[quit]** to return to the home screen.

```
MATHPRINT CLASSIC
NORMAL SCI ENG
FLOAT 0 1 2 3 4 5 6 7 8 9
RADIAN DEGREE
FUNCTION PARAMETRIC POLAR SEQ
THICK DOT-THICK THIN DOT-THIN
SEQUENTIAL SIMUL
REAL a+bi re^(θi)
FULL HORIZONTAL GRAPH-TABLE
FRACTIONTYPE: n/d Un/d
ANSWERS: AUTO DEC FRAC-APPROX
GO TO 2ND FORMAT GRAPH: NO YES
STAT DIAGNOSTICS: OFF ON
STAT WIZARDS: ON OFF
SET CLOCK 09/09/18 2:09PM
```

Type 20

Press **[2nd]** **[apps]** **([angle])** $1:^\circ$.

Press **[enter]**.

The GDC displays the angle, in radians, as a decimal.

```
20°
.....3490658504
█
```

To find this value as a multiple of π first divide by π .

Press **[÷]** press **[2nd]** **[^]** **([π])**.

Press **[alpha]** **[f1]** **4:►F◄►D**

Press **[enter]**.

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

```
20°
.....3490658504
Ans/π►F◄►D
.....1/9
```

Type 56.5

Press **[2nd]** **[apps]** **([angle])** $1:^\circ$.

Press **[enter]**.

$$56.5^\circ \approx 0.986$$

```
20°
.....3490658504
Ans/π►F◄►D
.....1/9
56.5°
.....9861110274
```

Press **[mode]**.

Use the **[◀]** **[▶]** **[▶]** **[▶]** keys to place the cursor on DEGREE in the Mode menu, and then press **[enter]** to highlight it.

Press **[2nd]** **[quit]** to return to the home screen.

```
MATHPRINT CLASSIC
NORMAL SCI ENG
FLOAT 0 1 2 3 4 5 6 7 8 9
RADIAN DEGREE
FUNCTION PARAMETRIC POLAR SEQ
THICK DOT-THICK THIN DOT-THIN
SEQUENTIAL SIMUL
REAL a+bi re^(θi)
FULL HORIZONTAL GRAPH-TABLE
FRACTIONTYPE: n/d Un/d
ANSWERS: AUTO DEC FRAC-APPROX
GO TO 2ND FORMAT GRAPH: NO YES
STAT DIAGNOSTICS: OFF ON
STAT WIZARDS: ON OFF
SET CLOCK 09/07/18 6:28PM
```

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Press XYZ [f1] 1:n/d to add a fraction template.

Type 4 press [2nd] \wedge ([π]) in the numerator and type 3 in the denominator.

Press \rightarrow

Press [2nd] [apps] ([angle]) 3:r.

Press [enter].

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

\angle	.3490658504
Ans/ π F \leftrightarrow D	$\frac{1}{9}$
56.5°	.9861110274
$\frac{4\pi}{3}$ r	240