3.7 Degrees and radians

SCIENTIA

3.7.1 Switch the calculator to degrees or radians mode

To switch from radians to degrees mode, press \mathbf{m}^{out} , highlight the correct mode (4th line) and press $\mathbf{m}^{\text{entry solve}}$.

3.7.2 Display exact value of an angle in radians

Suppose you have to compute the exact value in radians of $\sin^{-1}\left(\frac{1}{2}\right)$ on your calculator.

① Put your calculator in radians mode since you want the result in radians (see 3.7.1)

② compute sin⁻¹(1/2)

3	Divide	the	result by	π (press	s <mark>€ M</mark> ,	2nd and	π)
4	Press	A-lock alpha	, y=	, ▶ F∢ ▶ D,	entry solve enter		

The result of the steps should look like this:

NORMAL	FLOAT	AUTO	a+bi	RADIAN	MP	Î
sin ⁻¹ ([1/2])	-			
				52359	7877	56.
			Ø.	16666	56666	57
Ans≯F	F∢D					1
						<u>.</u>

Since you divided the result by π in the process, the final result has to be multiplied by π again. Thus,

$$\sin^{-1}\left(\frac{1}{2}\right) = \frac{\pi}{6} \text{ rad.}$$

3.7.3 Add degrees and radians

Suppose you have the following computation to do:

$$60^{\circ} + \frac{\pi}{2}$$
 rads, answer in radians

① Put your calculator in RADIAN mode since you want the result in radians (see 3.7.1)



The result should be 2.09 rad (rounded) or $\frac{2\pi}{3}$ rad (see 3.7.2 to display the result in terms of π)