

## Solving Trigonometric Equations in Radians

When a question is in radians then you deal with them in exactly the same way as degrees but you need to remember to change the mode on your calculator.

*Example 1:* Find the solution to  $7\sin \theta = 4$  for  $0 \leq \theta \leq 2\pi$

$$7\sin \theta = 4$$

$$\sin \theta = \frac{4}{7}$$

$$\theta = 0.608 \text{ rads (3dp)}$$

$\sin \theta$  is positive in quadrants 1 and 2

$$Q1 = 0.608 \text{ rads}$$

$$Q2 = \pi - 0.608$$

$$= 2.543 \text{ rads}$$

$\therefore$  The solutions are 0.608 rads and 2.534 rads