Edexcel A level Mathematics Trigonometry

Section 1: Working with radians

Exercise level 1

1. Convert each of the following angles to radians, giving your answers as a multiple of π.
   (i) 120°   (ii) 40°   (iii) 255°

2. Convert each of the following angles to radians, giving your answers to 3 significant figures.
   (i) 39°   (ii) 152°   (iii) 304°

3. Convert each of the following angles to degrees, giving your answers to 1 decimal place where appropriate.
   (i) $\dfrac{11\pi}{20}$ radians   (ii) 2 radians   (iii) 0.45 radians

4. Solve the following equations for $0 \le \theta \le 2\pi$ giving your answer in terms of π. You should not need your calculator.
   (i) $\sin\theta = \dfrac{\sqrt{3}}{2}$
   (ii) $\cos\theta = -\dfrac{\sqrt{3}}{2}$
   (iii) $\tan\theta = \sqrt{3}$