Circular Measures 1 (Radians)

1) Solve the equation

$\sin(2z - 0.6) = 0.8$ for $0 < z < 3$ radians. [4]

2) Solve

$\sec\left(\frac{z}{3}\right) = 4$ for $0 < z < 5$ radians. [3]

3) Solve, for $0 < y < 4$, the equation $\cot 2y = 0.25$, giving your answers in radians correct to 2 decimal places. [4]

4) Given that y is measured in radians, find the two smallest positive values of y such that

$$6\sin(2y + 1) + 5 = 0.$$ [5]

5) **(a)** Solve, for $0 \leqslant x \leqslant 2$, the equation $1 + 5\cos 3x = 0$, giving your answer in radians correct to 2 decimal places. [3]

6) Solve the equation

$\sec(z + \frac{\pi}{2}) = -2$, for $0 < z < \pi$ radians. [3]

7) Solve the equation

(ii) $2\cot^2 y + 3\operatorname{cosec} y = 0$ for $0 < y < 2\pi$ radians. [5]

8) Solve the equation

$\sec\left(2z + \frac{\pi}{3}\right) = -2$, for $0 \leqslant z \leqslant \pi$ radians. [4]