4ii $\sin 2\theta - 1 = \cos 2\theta$

(using identities $\sin 2\theta = 2\sin\theta\cos\theta$
and $\cos 2\theta$ as $1 - 2\sin^2\theta$)

$2\sin\theta\cos\theta - 1 = 1 - 2\sin^2\theta$

$2\sin^2\theta + 2\sin\theta\cos\theta - 2 = 0$

$\sin^2\theta + \sin\theta\cos\theta - 1 = 0$

(As. $1 = \sin^2\theta + \cos^2\theta$)

$\sin^2\theta + \sin\theta\cos\theta - (\sin^2\theta + \cos^2\theta) = 0$

$\sin\theta\cos\theta - \cos^2\theta = 0$

$\cos\theta(\sin\theta - \cos\theta) = 0$

Hence $\cos\theta = 0$ or $\sin\theta - \cos\theta = 0$

$\cos\theta = 0$
at $90°$ & $270°$
$\frac{\pi}{2}$ and $\frac{3\pi}{2}$

divide by $\cos\theta \neq 0$
$\therefore \tan\theta - 1 = 0$
$\tan\theta = 1$
$\downarrow$
$\theta = 45°$, or $315°$
Hence $\frac{\pi}{4}$ or $\frac{7\pi}{4}$

$\frac{\pi}{4}, \frac{\pi}{2}, \frac{3\pi}{2}, \frac{7\pi}{4}$ $(0 \leq \theta \leq 2\pi)$