

- 3** The function $f : x \mapsto a + b \cos x$ is defined for $0 \leq x \leq 2\pi$. Given that $f(0) = 10$ and that $f(\frac{2}{3}\pi) = 1$, find
- (i) the values of a and b , [2]
 - (ii) the range of f , [1]
 - (iii) the exact value of $f(\frac{5}{6}\pi)$. [2]