

- 8** **(i)** Express $4x^2 + 12x + 10$ in the form $(ax + b)^2 + c$, where a , b and c are constants. [3]
- (ii)** Functions f and g are both defined for $x > 0$. It is given that $f(x) = x^2 + 1$ and $fg(x) = 4x^2 + 12x + 10$.
Find $g(x)$. [1]
- (iii)** Find $(fg)^{-1}(x)$ and give the domain of $(fg)^{-1}$. [4]