3 **(a)** $f(x) = 4\ln(2x-1)$

(i) Write down the largest possible domain for the function f. [1]

(ii) Find $f^{-1}(x)$ and its domain. [3]

(b) $g(x) = x+5 \quad \text{for } x \in \mathbb{R}$

$h(x) = \sqrt{2x-3} \quad \text{for } x \geqslant \frac{3}{2}$

Solve $gh(x) = 7$. [3]