

9 You are given that

$$f(x) = 2x + 3 \quad \text{for } x < 0 \quad \text{and}$$

$$g(x) = x^2 - 2x + 1 \quad \text{for } x > 1.$$

(a) Find $gf(x)$, stating the domain. **[3]**

(b) State the range of $gf(x)$. **[1]**

(c) Find $(gf)^{-1}(x)$. **[5]**