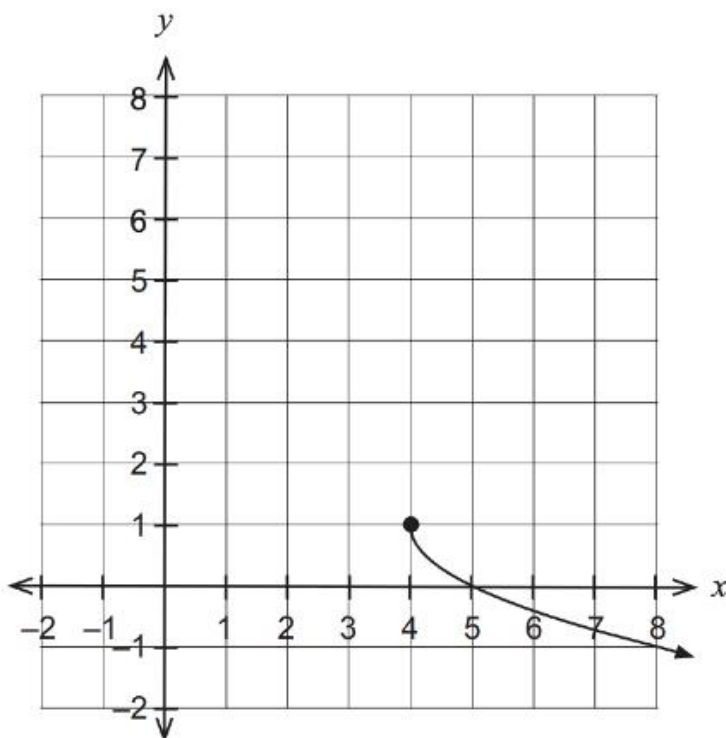


Question 4**(9 marks)**

Function f is defined as $f(x) = 1 - \sqrt{x-4}$. The graph of $y = f(x)$ is shown below.



- (a) Sketch the graph of $y = f^{-1}(x)$ on the axes above. (2 marks)
- (b) Determine the defining rule for $y = f^{-1}(x)$ and state its domain. (3 marks)
Function g is defined as $g(x) = \frac{1}{x^2}$.
- (c) Determine an expression for $f \circ g(x)$. (1 mark)
- (d) For $f \circ g(x)$, determine the domain. (3 marks)