

Question 1**(6 marks)**

Consider functions $f(x) = \sqrt{4-x}$ and $g(x) = \frac{1}{x^2}$.

(a) Determine the exact value of $g(f(-5))$. (2 marks)

(b) Determine the domain for $f(g(x))$. (3 marks)

(c) Explain why function g is not a one-to-one function. (1 mark)