

Question 1**(4 marks)**

Functions f and g are defined as $f(x) = \ln(x)$ and $g(x) = \frac{1}{x}$.

(a) Determine an expression for $g \circ f(x)$. (1 mark)

(b) For $g \circ f(x)$, state the:

(i) domain. (2 marks)

(ii) range.

(1 mark)