The function $f(x) = \dfrac{1}{x}$ is defined for the domain $\{x : x \in \mathbb{R}, x \neq 0\}$. The function $g(x)$ is defined for all real x. The composite function $fg(x)$ is defined by $fg(x) = \dfrac{1}{3x-6}$.

(a) Write down an expression for $g(x)$. **[1]**

(b) What is the domain of $fg(x)$? **[1]**

(c) Describe a sequence of two transformations that would map the graph of $y = f(x)$ onto the graph of $y = fg(x)$. **[4]**