

in Class Exercises – Week 8

(a) $f: \mathbb{R} \rightarrow \mathbb{R}$ is given by $f(x) = \frac{5}{7+x}$. Find the inverse of $f(x)$.

(b) $f: \mathbb{R} \rightarrow \mathbb{R}$ is given by $f(x) = 4x^2 - 1$ and $g: \mathbb{R} \rightarrow \mathbb{R}$ is given by $g(x) = x + 3$.
Find $(f \circ g)(x)$, $(g \circ f)(x)$, $(f \circ f)(x)$ and $(g \circ g)(x)$.