Ch1 Part 4

Wednesday, September 22, 2021 12:27 PM

Composition

$$(f \circ g)(x) = f(g(x))$$

Exp $f(x) = \sqrt{x}$ and $g(x) = x^2$

Find ① $D(f)$, $D(g)$

$D(f) = [0, \infty)$

$D(g) = \mathbb{R} = (-\infty, \infty)$

② $(f \circ g)(x) = f(g(x)) = f(x^2) = \sqrt{x^2} = |x|$

$g = x^2$

$R = [0, \infty)$

$\mathbb{R}$ $\mathbb{R}$

Domain $= \mathbb{R} = (-\infty, \infty)$ ✓

③ $(g \circ f)(x) = g(f(x)) = g(\sqrt{x}) = (\sqrt{x})^2 = x$

$[0, \infty)$ $\mathbb{R}$

Domain $= [0, \infty)$ ✓

$-2 \notin D$

$f(x) = \sqrt{x}$

$(g \circ f)(-2) = g(f(-2))$

غير معرفة