

Ex 2

• $f(x) = x^2 - 1$ $g(x) = \sqrt{x}$

Question: A) Find $f \circ g(x)$

B) Find $g \circ f(x)$

A) $f \circ g(x) = f(g(x))$ take $g(x)$ and put it inside f
 $= (\sqrt{x})^2 - 1$

$f \circ g(x) = x - 1$

B) $g \circ f(x) = g(f(x))$ $f(x)$ is the input of g function
 $f(x) = x^2 - 1$ $g(x) = \sqrt{x}$

B) $g(f(x)) = \sqrt{x^2 - 1}$

Ex 3 $f(x) = 2x - 3$ $g(x) = \sqrt{x+1}$

A) $f \circ g(x) = f(g(x)) = 2\sqrt{x+1} - 3$

B) $g \circ f(x) = g(f(x)) = \sqrt{2x-3+1} = \sqrt{2x-2}$

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