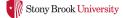# Function Composition

Problem

Let $f(x) = x^2 + 8$ and let $g(x) = \sqrt{x-3}$.

The domain of $(f \circ g)$ is the set of all real numbers.

(a) True
(b) False

Answer: (b) False. Need to consider elements of the domain of g for which $g(x)$ is in domain of f. The square root function is not defined for negative real numbers.