

Zadatak 8. Koliko je $f\left(\frac{1}{2}\right)$ ako je $(f \circ g)(x) = \frac{1-x^2}{x^2}$, $x \neq 0$, te $g(x) = 1-x^2$?

Rješenje. $(f \circ g)(x) = \frac{1-x^2}{x^2}$, $x \neq 0$, $g(x) = 1-x^2$

$$(f \circ g)(x) = f[g(x)] = f(1-x^2) = \frac{1-x^2}{x^2}$$

$$1-x^2 = t \implies x^2 = 1-t \implies f(t) = \frac{t}{1-t} \implies f\left(\frac{1}{2}\right) = \frac{\frac{1}{2}}{1-\frac{1}{2}} \implies f\left(\frac{1}{2}\right) = 1.$$