

Zadatak 4. Dokaži da za racionalnu funkciju $f(x) = \frac{1+x}{1-x}$, $x \neq 1$ vrijedi:

$$1) f(-x) = \frac{1}{f(x)}; \quad 2) f\left(\frac{1}{x}\right) = -f(x).$$

Rješenje. 1) $f(-x) = \frac{1-x}{1+x} = \frac{1}{\frac{1+x}{1-x}} = \frac{1}{f(x)};$

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