Zadatak 35. Riješi jednadžbu $(g \circ f)(x) = 4$ ako je
$f(x) = \log_{0.25} \dfrac{1}{x^2 - x + 4}$, $g(x) = 2^{x+1}$.

Rješenje. $f(x) = \log_{0.25} \dfrac{1}{x^2 - x + 4} = \log_4(x^2 - x + 4)$, $g(x) = 2^{x+1}$

$$(g \circ f)(x) = 2^{\log_4(x^2-x+4)+1} = 2^{\frac{1}{2}\log_2(x^2-x+4)+\log_2 2}$$
$$= 2^{\log_2 2\sqrt{x^2-x+4}} = 2\sqrt{x^2 - x + 4}$$

$$2\sqrt{x^2 - x + 4} = 4 \implies \sqrt{x^2 - x + 4} = 2 \;\Big/^2 \implies x^2 - x + 4 = 4$$
$$\implies x(x-1) = 0 \implies x_1 = 0, x_2 = 1.$$