Zadatak 24. Odredi zbroj kvadrata rješenja jednadžbe $(f \circ g)(x) = 0$ ako je $f(x) = 2x^2 - x + 1$, $g(x) = \frac{1}{2}x + 3$.

Rješenje. $f(x) = 2x^2 - x + 1$, $g(x) = \dfrac{1}{2}x + 3$

$$(f \circ g)(x) = 2\left(\frac{1}{2}x + 3\right)^2 - \left(\frac{1}{2}x + 3\right) + 1 = 2\left(\frac{1}{4}x^2 + 3x + 9\right) - \frac{1}{2}x - 3 + 1$$
$$= \frac{1}{2}x^2 + 6x + 18 - \frac{1}{2}x - 3 + 1 = \frac{1}{2}x^2 + \frac{11}{2}x + 16 = 0 \quad \Big/ \cdot 2$$

$$x^2 + 11x + 32 = 0 \implies x_1 + x_2 = -11, x_1x_2 = 32$$
$$x_1^2 + x_2^2 = (x_1 + x_2)^2 - 2x_1x_2 = 121 - 2 \cdot 32 \implies x_1^2 + x_2^2 = 57.$$