

Zadatak 13. Ako je $f(x) = x^2 - 8x + 12$, koliko je $f(x_0)$, $x_0 = 25^{-\log_{0.2}(1+\sqrt{3})}$?

Rješenje. $x_0 = 25^{-\log_{0.2}(1+\sqrt{3})} = 5^{-2\log_{5^{-1}}(1+\sqrt{3})} = 5^{\log_5(1+\sqrt{3})^2} = (1 + \sqrt{3})^2 = 4 + 2\sqrt{3} = 2(2 + \sqrt{3})$,

$$f(x_0) = 4(2 + \sqrt{3})^2 - 16(2 + \sqrt{3}) + 12 = 28 + 16\sqrt{3} - 32 - 16\sqrt{3} + 12 = 8.$$