

Zadatak 18. Ako je $\operatorname{tg} x = \frac{\sqrt{6}}{2}$, koliko je $\frac{\operatorname{tg} x + \operatorname{ctg} x}{\operatorname{tg} x - \operatorname{ctg} x}$?

Rješenje. $\operatorname{tg} x = \frac{\sqrt{6}}{2} \implies \operatorname{ctg} x = \frac{1}{\operatorname{tg} x} = \frac{2}{\sqrt{6}}$;

$$\frac{\operatorname{tg} x + \operatorname{ctg} x}{\operatorname{tg} x - \operatorname{ctg} x} = \frac{\frac{\sqrt{6}}{2} + \frac{2}{\sqrt{6}}}{\frac{\sqrt{6}}{2} - \frac{2}{\sqrt{6}}} = \frac{\frac{6+4}{2\sqrt{6}}}{\frac{6-4}{2\sqrt{6}}} = \frac{10}{2} = 5.$$