Zadatak 14. U skupu **R** riješi jednadžbu $\int_x^{x+1}(t^3+4)dt=\frac{11}{4}$.

Rješenje. $\int_x^{x+1}(t^3+4)dt=\int_x^{x+1}t^3dt+4\int_x^{x+1}dt=\frac{t^4}{4}\Big|_x^{x+1}+4t\Big|_x^{x+1}=\frac{1}{4}[(x+1)^4-x^4]+4(x+1-x)=\frac{1}{4}(x^4+4x^3+4x^2+2x^2+4x+1-x^4)+4=\frac{1}{4}(4x^3+6x^2+4x+1)+4=x^3+\frac{3}{2}x^2+x+\frac{17}{4}$.

$$x^3+\frac{3}{2}x^2+x+\frac{17}{4}=\frac{11}{4}$$

$$x^3+\frac{3}{2}x^2+x+\frac{3}{2}=0$$

$$x(x^2+1)+\frac{3}{2}(x^2+1)=0$$

$$\left(x+\frac{3}{2}\right)(x^2+1)=0$$

$$x=-\frac{3}{2}$$