Babeş-Bolyai University, Faculty of Mathematics and Computer Science Computer Science Groups 911-917, Academic Year 2021-2022

Mathematical Analysis Exercise Sheet 7

Compute

32.
$$\int \operatorname{tg}(x) dx$$
, $\int \ln(x) dx$, $\int \frac{x+2}{x^2+1} dx$

33.
$$\int \frac{\mathrm{d}x}{x^2 - 1}$$
, $\int \frac{\mathrm{d}x}{(x^2 + 1)(x - 2)}$, $\int \frac{\mathrm{d}x}{(x^2 + 4)^2}$

34.
$$\int (\sin(x))^4 dx$$
, $\int (\cos(x))^5 dx$

35.
$$\int \frac{\mathrm{d}x}{\sqrt[4]{1+x^4}}$$
 (Chebyshev)

$$36. \int \frac{\mathrm{d}x}{5 + 4\sin(x)}$$