Mathematical Analysis
Exercise Sheet 7

Compute

32. $\int \mathrm{tg}(x)\mathrm{d}x, \quad \int \ln(x)\mathrm{d}x, \quad \int \frac{x+2}{x^2+1}\mathrm{d}x$

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

34. $\int (\sin(x))^4 \,\mathrm{d}x, \quad \int (\cos(x))^5 \,\mathrm{d}x$

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

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