

$$\frac{A}{x - x_1}, \frac{A}{(x - x_1)^k}, \frac{Ax + b}{x^2 + px + q}, \frac{Ax + b}{(x^2 + px + q)^k} \text{ mit } p^2 < 4q \text{ und } A \neq 0$$

$$\int \frac{A}{x - x_1} dx = A \ln |x - x_1| + C$$

$$\int \frac{A}{(x - x_1)^k} dx = -\frac{A}{(k - 1)(x - x_1)^{k-1}} + C$$

$$\int \frac{dx}{x^2 + px + q} = \frac{2}{\sqrt{4q - p^2}} \cdot \arctan \frac{2x + p}{\sqrt{4q - p^2}} + C$$

$$\int \frac{Ax + B}{x^2 + px + q} dx = \frac{A}{2} \ln |x^2 + px + q| + \frac{2B - Ap}{\sqrt{4q - p^2}} \cdot \arctan \frac{2x + p}{\sqrt{4q - p^2}} + C$$