

**Primitiva funktioner**

| Funktion                      | Primitiv funktion         |
|-------------------------------|---------------------------|
| $k$                           | $kx + C$                  |
| $x^n \quad (n \neq -1)$       | $\frac{x^{n+1}}{n+1} + C$ |
| $\frac{1}{x}$                 | $\ln x + C \quad (x > 0)$ |
| $e^x$                         | $e^x + C$                 |
| $e^{kx}$                      | $\frac{e^{kx}}{k} + C$    |
| $a^x \quad (a > 0, a \neq 1)$ | $\frac{a^x}{\ln a} + C$   |
| $\sin x$                      | $-\cos x + C$             |
| $\cos x$                      | $\sin x + C$              |

**Komplexa tal****Representation**

$$z = x + iy = re^{iv} = r(\cos v + i \sin v) \text{ där } i^2 = -1$$

**Argument**

$$\arg z = v \quad \tan v = \frac{y}{x}$$

**Absolutbelopp**

$$|z| = r = \sqrt{x^2 + y^2}$$

**Konjugat**

$$\text{Om } z = x + iy \text{ så } \bar{z} = x - iy$$

**Räknelagar**

$$z_1 z_2 = r_1 r_2 (\cos(v_1 + v_2) + i \sin(v_1 + v_2))$$

$$\frac{z_1}{z_2} = \frac{r_1}{r_2} (\cos(v_1 - v_2) + i \sin(v_1 - v_2))$$

**de Moivres formel**

$$z^n = (r(\cos v + i \sin v))^n = r^n (\cos nv + i \sin nv)$$