

TRIGONOMETRIJSKE JEDNAKOSTI

$$\sin(x \pm y) = \sin x \cdot \cos y \pm \cos x \cdot \sin y$$

$$\cos(x \pm y) = \cos x \cdot \cos y \mp \sin x \cdot \sin y$$

$$\sin x \cdot \sin y = \frac{1}{2} [\cos(x - y) - \cos(x + y)]$$

$$\cos x \cdot \cos y = \frac{1}{2} [\cos(x - y) + \cos(x + y)]$$

$$\sin x \cdot \cos y = \frac{1}{2} [\sin(x - y) + \sin(x + y)]$$

NEODREĐENI INTEGRALI

$$\int dx = x + c$$

$$\int x^n dx = \frac{x^{n+1}}{n+1} + c \quad (n \neq -1)$$

$$\int \sin ax \, dx = -\frac{1}{a} \cos ax + c$$

$$\int \cos ax \, dx = \frac{1}{a} \sin ax + c$$

$$\begin{aligned} \int \sin(x + y) \, dx &= \int \sin x \cdot \cos y \, dx + \int \cos x \cdot \sin y \, dx = \cos y \cdot \int \sin x \, dx + \sin y \cdot \int \cos x \, dx = \\ &= \cos y \cdot (-\cos x) + \sin y \cdot \sin x + c = -(\cos y \cdot \cos x - \sin y \cdot \sin x) + c = \\ &= -\cos(x + y) + c \end{aligned}$$

$$\begin{aligned} \int \cos(x + y) \, dx &= \int \cos x \cdot \cos y \, dx - \int \sin x \cdot \sin y \, dx = \cos y \cdot \int \cos x \, dx - \sin y \cdot \int \sin x \, dx = \\ &= \cos y \cdot \sin x - \sin y \cdot (-\cos x) + c = \cos y \cdot \sin x + \sin y \cdot \cos x + c = \\ &= \sin(x + y) + c \end{aligned}$$

PARCIJALNA INTEGRACIJA

$$\int u(x) \cdot v'(x) \, dx = u(x) \cdot v(x) - \int u'(x) \cdot v(x) \, dx$$