Hodnoty goniometrických integrálů:

$$\int_0^{\pi/2} \cos^m(x)\sin^n(x)\,\mathrm{d}x = \frac{\Gamma\left(\frac{m+1}{2}\right)\Gamma\left(\frac{n+1}{2}\right)}{2\cdot\Gamma\left(\frac{m+n+2}{2}\right)}; \quad \Gamma(n) = (n-1)!\,; \quad \Gamma\left(n+\frac{1}{2}\right) = \sqrt{\pi}\frac{(2n-1)!!}{2^n}$$

Hodnoty jacobiánů vybraných souřadnic:

$$\begin{aligned} x &= s + a\varrho\cos(\varphi) \\ y &= t + b\varrho\sin(\varphi) \end{aligned} \qquad \det\left(\frac{\mathcal{D}(x,y)}{\mathcal{D}(\varrho,\varphi)}\right) = ab\varrho.$$

$$\begin{aligned} x &= s + a\varrho\cos^\alpha(\varphi) \\ y &= t + b\varrho\sin^\alpha(\varphi) \end{aligned} \qquad \det\left(\frac{\mathcal{D}(x,y)}{\mathcal{D}(\varrho,\varphi)}\right) = ab\alpha\varrho\cos^{\alpha-1}(\varphi)\sin^{\alpha-1}(\varphi).$$

$$\begin{aligned} x &= s + a\varrho\cos(\varphi) \\ y &= t + b\varrho\sin(\varphi) \\ z &= u + ch \end{aligned} \qquad \det\left(\frac{\mathcal{D}(x,y,z)}{\mathcal{D}(\varrho,\varphi,h)}\right) = abc\varrho.$$

$$\begin{aligned} x &= s + a\varrho\cos^\alpha(\varphi) \\ y &= t + b\varrho\sin^\alpha(\varphi) \\ z &= u + ch \end{aligned} \qquad \det\left(\frac{\mathcal{D}(x,y,z)}{\mathcal{D}(\varrho,\varphi,h)}\right) = abc\alpha\varrho\cos^{\alpha-1}(\varphi)\sin^{\alpha-1}(\varphi).$$

$$\begin{aligned} x &= s + a\varrho\cos(\vartheta)\cos(\varphi) \\ y &= t + b\varrho\cos(\vartheta)\sin(\varphi) \\ z &= u + c\varrho\sin(\vartheta) \end{aligned} \qquad \det\left(\frac{\mathcal{D}(x,y,z)}{\mathcal{D}(\varrho,\varphi,\vartheta)}\right) = abc\varrho^2\cos(\vartheta).$$

$$\begin{aligned} x &= s + a\varrho\cos^\beta(\vartheta)\cos^\alpha(\varphi) \\ y &= t + b\varrho\cos^\beta(\vartheta)\sin^\alpha(\varphi) \\ z &= u + c\varrho\sin^\beta(\vartheta) \end{aligned} \qquad \begin{aligned} &\det\left(\frac{\mathcal{D}(x,y,z)}{\mathcal{D}(\varrho,\varphi,\vartheta)}\right) = \\ &= abc\alpha\beta\varrho^2\cos^{2\beta-1}(\vartheta)\sin^{\beta-1}(\vartheta)\cos^{\alpha-1}(\varphi)\sin^{\alpha-1}(\varphi). \end{aligned}$$

$$\begin{aligned} x &= s + a\varrho\cos(\omega)\cos(\vartheta)\cos(\varphi) \\ y &= t + b\varrho\cos(\omega)\cos(\vartheta)\sin(\varphi) \\ z &= u + c\varrho\cos(\omega)\sin(\vartheta) \\ w &= v + d\varrho\sin(\omega), \end{aligned} \qquad \det\left(\frac{\mathcal{D}(x,y,z,w)}{\mathcal{D}(\varrho,\omega,\varphi,\vartheta)}\right) = abcd\varrho^3\cos^2(\omega)\cos(\vartheta).$$