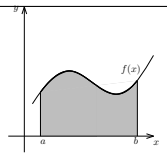
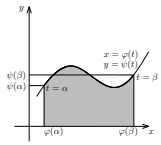
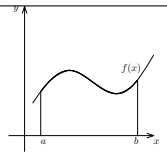
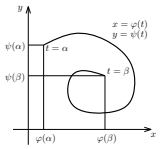
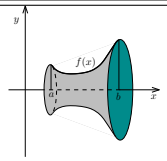
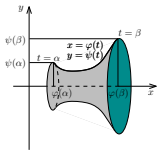
Vzorce

		Explicitní rovnice $y = f(x),\ x \in \langle a, b \rangle$	**Parametrické rovnice** $x = \varphi(t),\ y = \psi(t),\ t \in \langle \alpha, \beta \rangle$
Rovinná deska - hustota $\sigma(x)$ $\left[\mathrm{kg \cdot m^{-2}}\right]$			
	Plošný obsah $\left[\mathrm{m^2}\right]$	$S = \int_a^b \lvert f(x) \rvert \, \mathrm{d}x$	$S = \left\lvert \int_\alpha^\beta \psi(t)\, \varphi'(t) \, \mathrm{d}t \right\rvert$ $\psi(t) \geq 0,\ \varphi'(t) \neq 0,\ t \in (\alpha, \beta)$
	Hmotnost $[\mathrm{kg}]$	$m = \int_a^b \sigma(x)\ \lvert f(x) \rvert \, \mathrm{d}x$	
	Statické momenty $[\mathrm{kg \cdot m}]$	$S_x = \frac{1}{2} \int_a^b \sigma(x)\, f^2(x) \, \mathrm{d}x$ $S_y = \int_a^b \sigma(x)\, x\, f(x) \, \mathrm{d}x$ $f(x) \geq 0$	
	Momenty setrvačnosti $\left[\mathrm{kg \cdot m^2}\right]$	$I_x = \frac{1}{3} \int_a^b \sigma(x)\, f^3(x) \, \mathrm{d}x$ $I_y = \int_a^b \sigma(x)\, x^2\, f(x) \, \mathrm{d}x$ $f(x) \geq 0$	
Těžiště	$T = [x_T, y_T] = \left[\frac{S_y}{m}, \frac{S_x}{m} \right]$		

		Explicitní rovnice $y = f(x),\ x \in \langle a, b \rangle$	**Parametrické rovnice** $x = \varphi(t),\ y = \psi(t),\ t \in \langle \alpha, \beta \rangle$
Rovinný drát - hustota $\sigma(x)$, resp. $\sigma(t)$ $\left[\mathrm{kg \cdot m^{-1}}\right]$			
	Délka [m]	$L = \int_a^b \sqrt{1 + [f'(x)]^2}\,\mathrm{d}x$	$L = \int_\alpha^\beta \sqrt{[\varphi'(t)]^2 + [\psi'(t)]^2}\,\mathrm{d}t$
	Hmotnost [kg]	$m = \int_a^b \sigma(x) \sqrt{1 + [f'(x)]^2}\,\mathrm{d}x$	$m = \int_\alpha^\beta \sigma(t) \sqrt{[\varphi'(t)]^2 + [\psi'(t)]^2}\,\mathrm{d}t$
	Statické momenty $\left[\mathrm{kg \cdot m}\right]$	$S_x = \int_a^b \sigma(x)\, f(x) \sqrt{1 + [f'(x)]^2}\,\mathrm{d}x$ $S_y = \int_a^b \sigma(x)\, x \sqrt{1 + [f'(x)]^2}\,\mathrm{d}x$	$S_x = \int_\alpha^\beta \sigma(t)\, \psi(t) \sqrt{[\varphi'(t)]^2 + [\psi'(t)]^2}\,\mathrm{d}t$ $S_y = \int_\alpha^\beta \sigma(t)\, \varphi(t) \sqrt{[\varphi'(t)]^2 + [\psi'(t)]^2}\,\mathrm{d}t$
	Momenty setrvačnosti $\left[\mathrm{kg \cdot m^2}\right]$	$I_x = \int_a^b \sigma(x)\, f^2(x) \sqrt{1 + [f'(x)]^2}\,\mathrm{d}x$ $I_y = \int_a^b \sigma(x)\, x^2 \sqrt{1 + [f'(x)]^2}\,\mathrm{d}x$	$I_x = \int_\alpha^\beta \sigma(t)\, \psi^2(t) \sqrt{[\varphi'(t)]^2 + [\psi'(t)]^2}\,\mathrm{d}t$ $I_y = \int_\alpha^\beta \sigma(t)\, \varphi^2(t) \sqrt{[\varphi'(t)]^2 + [\psi'(t)]^2}\,\mathrm{d}t$
Rotační těleso - rotace kolem osy x			
	Objem $\left[\mathrm{m^3}\right]$	$V = \pi \int_a^b f^2(x)\,\mathrm{d}x$	$V = \pi \int_\alpha^\beta \psi^2(t)\, \lvert\varphi'(t)\rvert\,\mathrm{d}t$ $\psi(t) \geq 0,\ \varphi'(t) \neq 0,\ t \in (\alpha, \beta)$
	Povrch pláště $\left[\mathrm{m^2}\right]$	$P = 2\pi \int_a^b f(x) \sqrt{1 + [f'(x)]^2}\,\mathrm{d}x$	$P = 2\pi \int_\alpha^\beta \psi(t) \sqrt{[\varphi'(t)]^2 + [\psi'(t)]^2}\,\mathrm{d}t$ $\psi(t) \geq 0,\ t \in (\alpha, \beta)$
Těžiště	$T = [x_T, y_T] = \left[\frac{S_y}{m}, \frac{S_x}{m}\right]$		