1.5: Summary of the Formulas for Plane Laminas and Curves

Uniform Plane Lamina

$y = y(x)$	$r = r(\theta)$
$\bar{x} = \frac{1}{A}\int_a^b xydx$ $\bar{y} = \frac{1}{2A}\int_a^b y^2dx$	$\bar{x} = \frac{2\int_\alpha^\beta r^3 cos\theta d\theta}{3\int_\alpha^\beta r^2 d\theta}$ $\bar{y} = \frac{2\int_\alpha^\beta r^3 sin\theta d\theta}{3\int_\alpha^\beta r^2 d\theta}$

Uniform Plane Curve

$y = y(x)$	$r = r(\theta)$
$\bar{x} = \frac{1}{L}\int_a^b x[1+(\frac{dy}{dx})^2]^{\frac{1}{2}}$ $\bar{y} = \frac{1}{L}\int_a^b y[1+(\frac{dy}{dx})^2]^{\frac{1}{2}}$	$\bar{x} = \frac{1}{L}\int_\alpha^\beta rcos\theta[(\frac{dr}{d\theta})^2+r^2]^{\frac{1}{2}}$ $\bar{y} = \frac{1}{L}\int_\alpha^\beta rsin\theta[(\frac{dr}{d\theta})^2+r^2]^{\frac{1}{2}}$