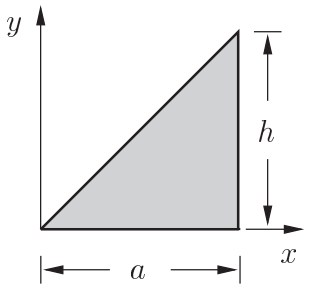
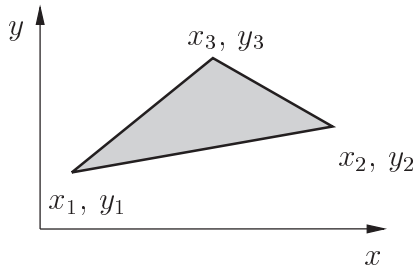
Tabelle von Schwerpunktskoordinaten

Flächen

Dreieck

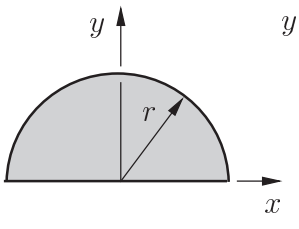


$$x_S = \tfrac{2}{3}a$$
$$y_S = \tfrac{1}{3}h$$
$$A = \tfrac{1}{2}ah$$



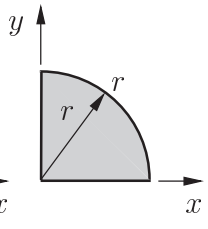
$$= \tfrac{1}{3}(x_1 + x_2 + x_3)$$
$$= \tfrac{1}{3}(y_1 + y_2 + y_3)$$
$$= \tfrac{1}{2}\begin{vmatrix} x_2 - x_1 & y_2 - y_1 \\ x_3 - x_1 & y_3 - y_1 \end{vmatrix}$$

Halbkreis



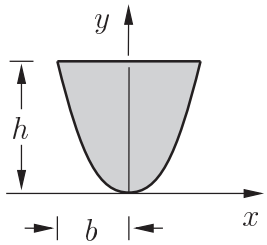
$$x_S = 0$$
$$y_S = \frac{4}{3\pi}\,r$$
$$A = \frac{\pi}{2}\,r^2$$

Viertelkreis



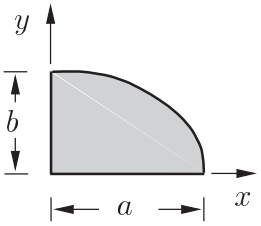
$$= \frac{4}{3\pi}\,r$$
$$= \frac{4}{3\pi}\,r$$
$$= \frac{\pi}{4}\,r^2$$

Quadr. Parabel



$$= 0$$
$$= \frac{3}{5}\,h$$
$$= \frac{4}{3}\,bh$$

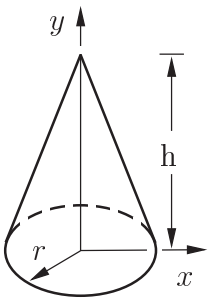
Viertelellipse



$$= \frac{4}{3\pi}\,a$$
$$= \frac{4}{3\pi}\,b$$
$$= \frac{\pi}{4}\,ab$$

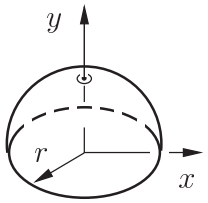
Körper

Kegel



$$x_S = 0$$
$$y_S = \frac{1}{4}\,h$$
$$V = \frac{1}{3}\pi r^2 h$$

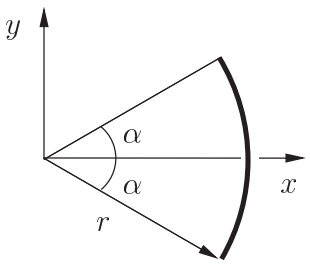
Halbkugel



$$x_S = 0$$
$$y_S = \frac{3}{8}\,r$$
$$V = \frac{2}{3}\pi r^3$$

Linie

Kreisbogen



$$x_S = \frac{\sin\alpha}{\alpha}\,r$$
$$y_S = 0$$
$$l = 2\alpha\,r$$