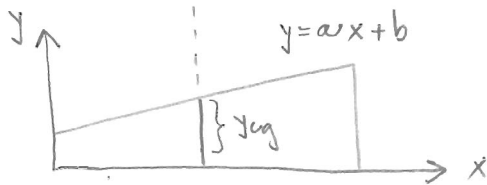


A ... area under curve $f(x)$ on the interval $(0; L)$



$$\int_0^L f(x)(ax+b)dx = \int_0^L [ax f(x) + b f(x)] dx = \int_0^L ax f(x) dx + \int_0^L b f(x) dx =$$

$$= a \int_0^L x f(x) dx + b \int_0^L f(x) dx =$$

$$= a \frac{\int_0^L x f(x) dx}{\int_0^L f(x) dx} \int_0^L f(x) dx + b \int_0^L f(x) dx =$$

$$= a x_{cog} A + b A = A (a x_{cog} + b) = \underline{\underline{A y_{cog}}}$$