



$$I\_{cm}=\sum\_{i=1}^{n}m\_{i}(x\_{i}^{2}+y\_{i}^{2})$$

$$I\_{P}=\sum\_{i=1}^{n}m\_{i}\left[\left(x\_{i}-a\right)^{2}+\left(y\_{i}-b\right)^{2}\right]$$

$$I\_{P}=\sum\_{i=1}^{n}m\_{i}\left[x\_{i}^{2}-2ax\_{i}+a^{2}+y\_{i}^{2}-2by\_{i}+b^{2}\right]$$

$$I\_{P}=\sum\_{i=1}^{n}m\_{i}\left(x\_{i}^{2}+y\_{i}^{2}\right)-2a\sum\_{i=1}^{n}m\_{i}x\_{i}-2b\sum\_{i=1}^{n}m\_{i}y\_{i}+\left(a^{2}+b^{2}\right)\sum\_{i=1}^{n}m\_{i}$$

$$I\_{p}=I\_{cm}+Md^{2}$$