$$x_G = \frac{\iint_S x \, dx\,dy}{\text{Aire}(S)}$$ → 0,25

En coordonnées polaires

$$x_G = \frac{\iint_S r\cos\theta \, dr\,d\theta}{2\pi}$$ → 0,5

$$= \frac{\int_{\frac{\pi}{3}}^{\frac{\pi}{2}+\frac{\pi}{6}} \cos\theta \left[\int_1^3 r^2 dr\right] d\theta}{2\pi}$$ 0,5

$$= \frac{\frac{26}{3}\left[\sin\theta\right]_{\frac{\pi}{3}}^{\frac{\pi}{2}+\frac{\pi}{6}}}{2\pi}$$ → 0,25

$$= \frac{13}{3\pi}\left(\sin\left(\frac{\pi}{2}+\frac{\pi}{6}\right) - \sin\frac{\pi}{3}\right)$$

$$= \frac{13}{3\pi}\left(\cos\frac{\pi}{6} - \sin\frac{\pi}{3}\right) = 0$$ 0,5

$\cos\frac{\pi}{6} \to \frac{\sqrt{3}}{2}$; $\sin\frac{\pi}{3} \to \frac{\sqrt{3}}{2}$