ply_tex2sym example 14 No.1

(1) $\displaystyle\int_0^1 \int_y^{2y} (x^2+y^2+1)\,dx\,dy = \frac{4}{3}$

(2) $\displaystyle\int_{-1}^1 \int_0^{\sqrt{1-x^2}} x^2 y\,dy\,dx = \frac{2}{15}$

(3) $\displaystyle\left(\frac{d}{dx}\right)^4 x^5 = 120x$

(4) $\displaystyle\frac{d^2}{dx^2}\,x^5 = 20x^3$

(5) $\displaystyle\frac{d^3}{d\theta^3}\,(\theta\cos\theta) = \theta\sin(\theta) - 3\cos(\theta)$

(6) $\displaystyle\frac{d}{dx}\,f(x) + 2f(x) = 3e^{4x}$ $\qquad f(x) = \left(C_1 + \frac{e^{6x}}{2}\right)e^{-2x}$

(7) $\displaystyle\frac{d^2}{dx^2}\,f(x) = -f(x)$ $\qquad f(x) = C_1\sin(x) + C_2\cos(x)$

(8) $\displaystyle\frac{d^2}{dx^2}\,f(x) - 2\frac{d}{dx}\,f(x) + f(x) = \sin x$ $\qquad f(x) = (C_1 + C_2 x)\,e^x + \frac{1}{2}\cos(x)$

(9) $\Gamma(5) = 24$

(10) $\displaystyle\Gamma\left(-\frac{3}{2}\right) = \frac{4\sqrt{\pi}}{3}$

(11) $\displaystyle\zeta(2) = \frac{\pi^2}{6}$

(12) $\displaystyle\zeta(10) = \frac{\pi^{10}}{93555}$