п.70 №3 (i)

$$\begin{array}{r|l} 2x-4 & \\ \hline 2x^2+3 & x+2 \\ 2x^2+4x & \\ \hline -4x+3 & \\ -4x-8 & \\ \hline 11 & \end{array}$$

$$\int_{-1}^{0} \frac{2x^2+3}{x+2}\,dx = \int_{-1}^{0}\left(2x-4+\frac{11}{x+2}\right)dx = x^2-4x+11\ln|x+2|\Big|_{-1}^{0} =$$

$$= 11\ln 2-\left(1+4+11\ln 1\right) = 11\ln 2-5$$

(ii)

$$\int_{-\frac{\pi}{4}}^{0}(\sin x\cos x+\sin 2x\cos 2x)\,dx = \int_{-\frac{\pi}{4}}^{0}(0.5\sin 2x+0.5\sin 4x)\,dx = \frac{-\cos 2x}{4}-\frac{\cos 4x}{8}\Big|_{-\frac{\pi}{4}}^{0} =$$

$$= \left(-\frac{1}{4}-\frac{1}{8}\right)-\left(0+\frac{1}{8}\right) = -\frac{1}{2}$$