

$$\frac{2.50}{6} \quad \textcircled{E} \quad \int_{-4}^{-3} \frac{x^2+x-1}{x+2} dx = \int_{-4}^{-3} \frac{x(x+2)-x-1}{x+2} dx = \int_{-4}^{-3} \left(x - \frac{x+2-1}{x+2}\right) dx = \int_{-4}^{-3} \left(x - 1 + \frac{1}{x+2}\right) dx =$$

$$= \left. \frac{x^2}{2} - x + \ln|x+2| \right|_{-4}^{-3} = \left(\frac{9}{2} - 3 + \ln 1 \right) - \left(\frac{16}{2} - 4 + \ln 2 \right) = \frac{9}{2} - \ln 2$$

$$\textcircled{F} \quad \int_0^{\frac{\pi}{2}} \sin x \cos(2x) dx = \int_0^{\frac{\pi}{2}} (\sin 3x - \sin x) dx = \left[-\frac{1}{3} \frac{\cos 3x}{3} + \frac{\cos x}{1} \right]_0^{\frac{\pi}{2}} = \frac{1}{3} \left[(0-1) - \left(-\frac{1}{3}+1\right) \right] = -\frac{1}{3}$$