

1 (1) $-xe^{-x} - e^{-x} + C$

(2) $\frac{1}{2}x^2 \log x - \frac{1}{4}x^2 + C$

(3) $\frac{1}{2}(1+2x) \log(1+2x) - x + C$

(4) $-(1-x) \log(1-x) - x + C$

2 (1) $x^2 e^x - 2xe^x + 2e^x + C$

(2) $-x^2 \cos x + 2x \sin x + 2 \cos x + C$

(3) $x(\log x)^2 - 2x \log x + 2x + C$

(4) $\frac{1}{2}x^2 (\log x)^2 - \frac{1}{2}x^2 \log x + \frac{1}{4}x^2 + C$

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(1) $\frac{2}{15}(3x-2)(x+1)\sqrt{x+1} + C$

(2) $\frac{1}{3}e^{3x} - \frac{1}{2}e^{2x} + e^x - \log(e^x + 1) + C$

(3) $\log \frac{e^x}{e^x + 1} + C$

(4) $\frac{1}{2}e^{2x} - \log(e^{2x} + 2) + C$

