

$$\textcircled{2} \textcircled{1} \int_1^4 \frac{4+\sqrt{x}}{x^2} dx =$$

$$\int_1^4 \left(\frac{4}{x^2} + \frac{1}{x^{1.5}} \right) dx = \left. -\frac{4}{x} - \frac{2}{\sqrt{x}} \right|_1^4 = \left(-\frac{4}{4} - \frac{2}{2} \right) - \left(-4 - 2 \right) = 1\frac{3}{4}$$

$$\textcircled{2} \int_0^{\pi} (\ln \frac{x}{2} - \ln \frac{x}{2})^2 dx = \int_0^{\pi} (\ln^2 \frac{x}{2} - 2\ln \frac{x}{2} \ln \frac{x}{2} + \ln^2 \frac{x}{2}) dx = \int_0^{\pi} (1 - \ln x) dx =$$
$$= x + \ln x \Big|_0^{\pi} = (\pi - 1) - 1 = \pi - 2$$