$$\int \frac{\sin\sqrt{x}}{\sqrt{x}}\,dx$$

Substitution:

$$u = \sqrt{x}$$

$$\frac{du}{dx} = \frac{1}{2\sqrt{x}} \qquad \Big| \cdot 2dx$$

$$2du = \frac{dx}{\sqrt{x}}$$

$$\int \frac{\sin\sqrt{x}}{\sqrt{x}}\,dx = \int \sin\sqrt{x} \cdot \frac{dx}{\sqrt{x}} = 2\int \sin u\,du = -2\cos u = -2\cos\sqrt{x}$$

$$\int \frac{1}{x\ln x}\,dx$$

Substitution:

$$u = \ln x$$

$$\frac{du}{dx} = \frac{1}{x}$$

$$du = \frac{dx}{x}$$

$$\int \frac{1}{x\ln x}\,dx = \int \frac{1}{\ln x} \cdot \frac{dx}{x} = \int \frac{1}{u}\,du = \ln|u| = \ln|\ln x|$$