

**1**  $\int_0^{2\pi} \tan(\cos(x)) dx = 0$

**2**  $\int \frac{x+1}{x(x+\log x)} dx = \log(x+\log x)$

**3**  $\int e^{x+e^x} + e^{x-e^x} dx = e^{e^x} - e^{-e^x}$

**4**  $\int_{-1/2}^{1/2} \frac{dx}{1-x^2} = \log 3$

**5**  $\int_0^2 2^{\log x} dx = \frac{2^{1+\log 2}}{1+\log 2}$

**6**  $\int_{-2\pi}^{2\pi} (\cos 3x + \sin 2x)(-\sin 2019x + \cos 3x) dx = 2\pi$

**7**  $\int \cos x \cdot \cos \sin x \cdot \cos \sin \sin x dx = \sin \sin \sin x$

**8**  $\int_0^\infty \frac{e^{-\frac{2019}{4t^2}}}{t^2} dt = \sqrt{\frac{\pi}{2019}}$

**9**  $\int \sin(\sqrt{x}) dx = 2\sin(\sqrt{x}) - 2\sqrt{x}\cos(\sqrt{x})$

**10**  $\int_0^1 \frac{\sqrt{x}}{1+x} dx = 2 - \frac{\pi}{2}$

$$\boxed{11} \quad \int_0^{2\pi} \cos(x) \cos(2x) \cos(3x) \, dx = \frac{\pi}{2}$$

$$\boxed{12} \quad \lim_{n \rightarrow \infty} \int_{-\infty}^{\infty} e^{-x^{2n}} \, dx = 2$$

$$\boxed{13} \quad \int_0^e x^{\frac{1}{\log x}} \, dx = e^2$$

$$\boxed{14} \quad \int_0^{\pi/100} \frac{\sin(20x) + \sin(19x)}{\cos(20x) + \cos(19x)} \, dx = -\frac{2}{39} \log \cos \frac{39\pi}{200}$$

$$\boxed{15} \quad \int (e^x \cos^2(x) + e^x \cos(x) \sin(x) - e^x \sin^2(x)) \, dx = e^x \cos(x) \sin(x)$$

$$\boxed{16} \quad \int_0^{\pi/2} \frac{\sin x}{\sin(x + \pi/4)} \, dx = \frac{\pi}{2\sqrt{2}}$$

$$\boxed{17} \quad \int \frac{dx}{x + \sqrt[3]{x}} = \frac{3}{2} \log(1 + x^{2/3})$$

$$\boxed{18} \quad \int_0^2 x^{x^2+1} (2 \log(x) + 1) \, dx = 15$$

$$\boxed{19} \quad \int \frac{2x^3 - 1}{x(x^3 + 1)} \, dx = \log(x^3 + 1) - \log x$$

$$\boxed{20} \quad \int \cos(\arctan(x)) \, dx = \sinh^{-1} x = \log \left( \sqrt{x^2 + 1} + x \right)$$