

$$\boxed{1} \int \frac{x^2}{\sqrt{x^3+2}} dx = \frac{2\sqrt{x^3+2}}{3}$$

$$\boxed{2} \int_1^\infty \frac{\log x}{x^2} dx = 1$$

$$\boxed{3} \int \operatorname{sech}(x) dx = 2 \arctan(e^x)$$

$$\boxed{4} \int x^3 e^{x^2} dx = \frac{1}{2}(x^2 - 1)e^{x^2}$$

$$\boxed{5} \int_1^2 \frac{1}{x\sqrt{x^2-1}} dx = \pi/3$$

$$\boxed{6} \int_1^\infty \frac{dx}{x(x^2+1)} = \frac{\log 2}{2}$$

$$\boxed{7} \int \cosh^{-1} x dx = x \cosh^{-1} x - \sqrt{x^2-1}$$

$$\boxed{8} \int_{-\infty}^\infty e^{-2x^2-5x-3} dx = e^{1/8} \sqrt{\pi/2}$$

$$\boxed{9} \int \sin \sqrt{x} dx = 2 \sin \sqrt{x} - 2\sqrt{x} \cos \sqrt{x}$$

$$\boxed{10} \int_0^\infty \frac{dx}{(x+1/x)^2} = \frac{\pi}{4}$$

$$\boxed{11} \quad \int \frac{(2+x)e^{-x}}{x^3} dx = -\frac{e^{-x}}{x^2}$$

$$\boxed{12} \quad \int_0^1 \frac{dx}{\sqrt{x(1-x)}} = \pi$$

$$\boxed{13} \quad \int_0^\infty \frac{\tanh(x)}{\exp(x)} dx = \frac{\pi}{2} - 1$$

$$\boxed{14} \quad \int_0^{\frac{\pi}{2}} \sqrt{\sin(x)+1} dx = 2$$

$$\boxed{15} \quad \lim_{n \rightarrow \infty} I_n, \text{ where } I_1 = \int_0^1 \frac{dx}{1+\sqrt{x}}, \quad I_2 = \int_0^1 \frac{dx}{1+\frac{1}{1+\sqrt{x}}}, \quad \dots = \frac{\sqrt{5}-1}{2}$$

$$\boxed{16} \quad \int_{-\infty}^\infty \frac{\sin^2(x+\pi/4)}{e^{x^2}} dx = \frac{\sqrt{\pi}}{2}$$

$$\boxed{17} \quad \int_{-\infty}^\infty 3x^2(x^3+1)^2 e^{-x^6-2x^3} dx = \frac{e\sqrt{\pi}}{2}$$

$$\boxed{18} \quad \int_0^{\pi/2} \frac{dx}{1+\tan^{2017} x} = \pi/4$$

$$\boxed{19} \quad \int e^{2x} \cos(3x) dx = \frac{1}{13} e^{2x} (3 \sin(3x) + 2 \cos(3x))$$

$$\boxed{20} \quad \int (\cos(x))^{\cos(x)+1} \tan(x) (1 + \log(\cos(x))) dx = -\cos(x)^{\cos(x)}$$