

$$\boxed{1} \int_1^e \log(x^2) dx = 2$$

$$\boxed{10} \int_{-1}^0 \frac{x^2}{x-1} dx = \frac{1}{2} - \log 2$$

$$\boxed{2} \int_{-9}^9 \sin(\sqrt[3]{x}) dx = 0$$

$$\boxed{11} \int x \arctan x dx = \frac{1}{2} x^2 \arctan(x) - \frac{x}{2} +$$

$$\boxed{3} \int_0^\infty \frac{d}{dx} [e^{1+x-x^2}] dx = -e$$

$$\frac{1}{2} \arctan(x)$$

$$\boxed{12} \int \frac{dx}{x^2 - 15x - 2014} = \frac{1}{91} \log \left| \frac{x-53}{x+38} \right|$$

$$\boxed{4} \int_0^2 \sqrt{x + \sqrt{x + \sqrt{x + \dots}}} dx = \frac{19}{6}$$

$$\boxed{13} \int e^x [\log(1+x^2) - 2(1+x) \arctan x] dx =$$

$$\boxed{5} \int \sqrt{x} e^{\sqrt{x}} dx = 2e^{\sqrt{x}}(x - 2\sqrt{x} + 2)$$

$$e^x [\log(1+x^2) - 2x \arctan x]$$

$$\boxed{6} \int \sin(2x) \cos(3x) dx = \frac{\cos x}{2} - \frac{\cos 5x}{10}$$

$$\boxed{14} \int (\arcsin x)^2 dx = 2\sqrt{1-x^2} \arcsin x -$$

$$2x + x(\arcsin x)^2$$

$$\boxed{7} \int_0^{2\pi} |1 + 2 \sin x| dx = \frac{2\pi}{3} + 4\sqrt{3}$$

$$\boxed{15} \int \frac{\sqrt{x^2-1}}{x} dx = \sqrt{x^2-1} -$$

$$\arctan \sqrt{x^2-1}$$

$$\boxed{8} \int x(1-x)^{2014} dx = \frac{(1-x)^{2016}}{2016} -$$

$$\boxed{16} \int x \sec^2(4x) dx = \frac{x \tan(4x)}{4} +$$

$$\frac{(1-x)^{2015}}{2015}$$

$$\frac{\log(\cos(4x))}{16}$$

$$\boxed{9} \int \operatorname{arcsinh}(x) = x \operatorname{arcsinh}(x) - \sqrt{x^2+1}$$

$$\boxed{17} \int \frac{2}{6-11x+6x^2-x^3} dx = 2\log(2-$$

$$x) - \log(x^2 - 4x + 3)$$

$$\boxed{18} \int_0^1 \frac{1}{[1 - \log_2(1-x)]} dx = \log 2$$

$$\boxed{19} \int_0^{1/\sqrt{3}} \sqrt{x + \sqrt{x^2 + 1}} dx = \frac{2}{3}$$

$$\boxed{20} \int_0^{5\pi/2} \frac{dx}{2 + \cos x} = \frac{7\sqrt{3}\pi}{9}$$