

1.1

$$\int_1^{e^3} \frac{dx}{3x\sqrt{1+\ln(x)}}$$

3.1

$$\int_{-\frac{\pi}{10}}^0 x \sin(5x) dx$$

1.2

$$\int_1^e \frac{1-\ln(x^2)}{x} dx$$

3.2

$$\int_0^1 x \operatorname{arctg}(\sqrt{3}x^2) dx$$

1.3

$$\int_0^{\frac{\pi}{3}} \cos^2(3x) dx$$

3.3

$$\int_0^1 \left(\arcsin(x) - \frac{\pi}{2} \right) dx$$

1.5

$$\int_0^{\frac{\pi}{3}} \frac{80}{3} \cos^3(x) \sin(2x) dx$$

4.1

$$\int_0^{\frac{\pi}{4}} \frac{\operatorname{tg}(x) dx}{4-3\cos^2(x)}$$

1.6

$$\int_0^{\frac{\pi}{7}} \sin^3(7x) dx$$

4.2

$$\int_0^2 \frac{dx}{\sqrt{x+1} + \sqrt{(x+1)^3}}$$

2.1

Vid. Teorema:

$$f(x) = \sin(2x), \quad \left[0; \frac{\pi}{2}\right]$$

4.3

$$\int_0^{\frac{5\pi}{2}} \cos^7\left(\frac{x}{5}\right) dx$$

2.2

$$\int_{-\frac{\pi}{2}}^{\frac{\pi}{2}} x^8 \sin(x) dx$$

5.1

$$\int_{-\infty}^{+\infty} \frac{dx}{x^2 + 2x + 5}$$

2.2

$$\int_{-\frac{\pi}{4}}^{\frac{\pi}{4}} \frac{x^5 + 3x^3 - 7x - 2}{\cos^2(x)} dx$$

5.2

$$\int_0^{+\infty} (x+4)^4 dx$$