

№1

Знайти:

1. $\int \frac{dx}{\sqrt{2x+1}}.$ 2. $\int \sin x \cdot \cos x dx.$

3. $\int (2x+7)^{10} dx.$ 4. $\int \frac{dx}{3x^2+4}.$

5. $\int x \cos 3x dx$ 6. $\int \frac{x dx}{\sqrt{x+8}}$

7. $\int \frac{4x^2+15x+5}{(x-1)(x+2)(x+3)} dx.$

№3

Знайти

1. $\int \frac{dx}{3x^2-4}.$ 2. $\int \frac{\cos 2x}{\cos^2 x \cdot \sin^2 x} dx.$

3. $\int \frac{dx}{(2x+3)^5}.$ 4. $\int \frac{x^2+1}{x^2+4} dx.$

5. $\int x e^{-5x} dx$ 6. $\int \frac{dx}{\sqrt{x} + \sqrt[3]{x}}$

7. $\int \frac{24}{(x^2-4x)(x+2)} dx.$

№5

Знайти

1. $\int 3^{-2x+1} dx.$ 2. $\int \frac{(1+\sqrt[3]{x})^2}{x} dx.$

3. $\int \sin^2 \frac{x}{2} dx.$ 4. $\int \frac{dx}{\sqrt[3]{5x-1}}.$

5. $\int \ln(x+4) dx$ 6. $\int \frac{dx}{\sqrt{x+1}}$

7. $\int \frac{6x^2-x-3}{(x^2-x)(x+1)} dx.$

№7

Знайти

1. $\int \frac{dx}{\sin^2 5x}.$ 2. $\int \frac{3 \cdot 2^x - 2 \cdot 3^x}{2^x} dx.$

3. $\int \sqrt[3]{3x+2} dx.$ 4. $\int (2x+7)^{10} dx.$

5. $\int x \cos 3x dx$ 6. $\int \frac{x dx}{\sqrt{2x+1}+1}$

7. $\int \frac{5x+7}{(x-1)(x+2)(x+3)} dx.$

№2

Знайти:

1. $\int \frac{dx}{2x^2+3}.$ 2. $\int \frac{\sin^2 2x-4}{\cos^2 2x} dx.$

3. $\int \frac{dx}{\sqrt{4x+1}}.$ 4. $\int \frac{x^2 dx}{x^2-4}.$

5. $\int x \cos 4x dx$ 6. $\int \frac{dx}{x\sqrt{x^2-1}}$

7. $\int \frac{3x^2+4x-11}{(x^2-1)(x-2)} dx.$

№4

Знайти

1. $\int \frac{dx}{2^{3x-1}}.$ 2. $\int \operatorname{ctg} \left(\frac{x}{2} + 1 \right) dx.$

3. $\int \frac{x dx}{x+4}.$ 4. $\int 5^{3x-5} dx.$

5. $\int x \sin 4x dx$ 6. $\int \frac{\sqrt{x} dx}{\sqrt{x} - \sqrt[3]{x}}$

7. $\int \frac{3x^2-7}{(x^2-3x+2)(x+3)} dx.$

№6

Знайти

1. $\int \operatorname{tg} \frac{x}{3} dx.$ 2. $\int \frac{(1+\sqrt{x})^2}{\sqrt[3]{x}} dx.$

3. $\int \frac{dx}{\sqrt{5x^2+1}}.$ 4. $\int \frac{4^x-1}{2^x} dx.$

5. $\int x e^{2x} dx$ 6. $\int \frac{dx}{1+\sqrt[3]{x+1}}$

7. $\int \frac{x^2+5x}{(x^2+x-2)(x+1)} dx.$

№8

Знайти

1. $\int \frac{dx}{3x+2}.$ 2. $\int \frac{dx}{\cos 2x + \sin^2 x}.$

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

5. $\int x \sin 4x dx$ 6. $\int \frac{(x+1) dx}{\sqrt[3]{3x+1}}$

7. $\int \frac{2}{x(x-1)(x+1)} dx.$

№9

Знайти

1. $\int \sqrt{5x-3} dx$ 2. $\int \frac{dx}{(2x+3)^5}$.

3. $\int \frac{dx}{7x-2}$ 4. $\int \frac{3^{4x}+2}{3^x} dx$.

5. $\int x \sin 5x dx$ 6. $\int \frac{x dx}{\sqrt{x+3}}$

7. $\int \frac{13x-34}{(x^2-4)(x-3)} dx$.

№11

Знайти

1. $\int \frac{dx}{\sqrt{1-2x^2}}$ 2. $\int \frac{dx}{\cos^2 \frac{x}{2}}$

3. $\int (3x-2)^5 dx$ 4. $\int \frac{(x+1)^2}{\sqrt{x}} dx$.

5. $\int x \cos \frac{x}{3} dx$ 6. $\int \frac{x dx}{\sqrt{x-1}}$

7. $\int \frac{6(1-2x)}{(x+4)(x+1)(x-2)} dx$.

№13

Знайти

1. $\int \frac{3^{4x}+2}{3^x} dx$ 2. $\int (2^x-3)^2 dx$.

3. $\int \frac{dx}{2x^2-3}$ 4. $\int \frac{x dx}{x+4}$.

5. $\int x \sin 4x dx$ 6. $\int \frac{(1+x) dx}{x+\sqrt{x}}$

7. $\int \frac{2x^2-7x-40}{(x+4)(x+2)(x-1)} dx$.

№15

Знайти

1. $\int \frac{3+\cos^2 x}{\sin^2 x} dx$ 2. $\int \sqrt{2x-5} dx$.

3. $\int \frac{dx}{\sqrt{2x^2-1}}$ 4. $\int 3^{2x} \cdot 2^{2x+1} dx$.

5. $\int x e^{5x} dx$ 6. $\int \frac{\sqrt{x+2} dx}{x-3}$

7. $\int \frac{6x^2-8x-36}{(x-4)(x^2+3x)} dx$.

№10

Знайти

1. $\int \frac{dx}{\sqrt[3]{3x+2}}$ 2. $\int (3^x+1)^2 dx$.

3. $\int \cos^2 \frac{x}{4} dx$ 4. $\int \frac{dx}{5x-7}$.

5. $\int x \cos \frac{x}{5} dx$ 6. $\int \frac{x^2 dx}{\sqrt{x-3}}$

7. $\int \frac{-2x^2-10x-14}{(x+1)(x+2)(x+3)} dx$.

№12

Знайти

1. $\int \frac{dx}{5x^2-3}$ 2. $\int \frac{x^2-1}{x^2+1} dx$.

3. $\int \frac{dx}{(3x-1)^7}$ 4. $\int \frac{(2+\sqrt{x})^2}{x} dx$.

5. $\int \ln(x+4) dx$ 6. $\int \frac{\sqrt{x+2} dx}{x-3}$

7. $\int \frac{x^2-18x+39}{(x-3)(x+3)(x-1)} dx$.

№14

Знайти

1. $\int \frac{dx}{\sin^2(3x-1)}$ 2. $\int (3x+2)\sqrt{3x} dx$.

3. $\int \frac{dx}{3x^2+1}$ 4. $\int \frac{dx}{5x-7}$.

5. $\int x e^{-3x} dx$ 6. $\int \frac{dx}{\sqrt{x}(x+3)}$

7. $\int \frac{9x-15}{(x^2-x)(x+5)} dx$.

№16

Знайти

1. $\int \frac{(4+x)^2}{x\sqrt{x}} dx$ 2. $\int \frac{\sin^2 2x-4}{\cos^2 2x} dx$.

3. $\int \frac{dx}{9x^2+5}$ 4. $\int \frac{dx}{5^{3x+4}}$.

5. $\int x \cos \frac{x}{5} dx$ 6. $\int \frac{(x+1) dx}{x\sqrt{x-1}}$

7. $\int \frac{-6x-22}{(x^2+3x+2)(x-3)} dx$.

№17

Знайти:

1. $\int \frac{dx}{\sqrt{2x+1}}$.

2. $\int \sin x \cdot \cos x dx$.

3. $\int (2x+7)^{10} dx$.

4. $\int \frac{dx}{3x^2+4}$.

5. $\int x \cos 3x dx$

6. $\int \frac{(x-1)dx}{x\sqrt{x-2}}$

7. $\int \frac{4x^2+15x+5}{(x-1)(x+2)(x+3)} dx$.

№19

Знайти

1. $\int \frac{dx}{3x^2-4}$.

2. $\int \frac{\cos 2x}{\cos^2 x \cdot \sin^2 x} dx$.

3. $\int \frac{(1+\sqrt{x})^2}{\sqrt[3]{x}} dx$.

4. $\int \frac{x^2+1}{x^2+4} dx$.

5. $\int \ln(x+4) dx$

6. $\int \frac{dx}{\sqrt{x+1}}$

7. $\int \frac{24}{(x^2-4x)(x+2)} dx$.

№21

Знайти

1. $\int 3^{-2x+1} dx$.

2. $\int \frac{(1+\sqrt[3]{x})^2}{x} dx$.

3. $\int \sin^2 \frac{x}{2} dx$.

4. $\int \frac{dx}{\sqrt[3]{5x-1}}$.

5.

№23

Знайти

1. $\int \frac{dx}{\sin^2 5x}$.

2. $\int \frac{3 \cdot 2^x - 2 \cdot 3^x}{2^x} dx$.

3. $\int \sqrt[3]{3x+2} dx$.

4. $\int \frac{3+\cos^2 x}{\sin^2 x} dx$.

5.

№18

Знайти:

1. $\int \frac{dx}{2x^2+3}$.

2. $\int \frac{x^2+5}{x^2-2} dx$.

3. $\int \frac{dx}{\sqrt{4x+1}}$.

4. $\int \frac{x^2 dx}{x^2-4}$.

5. $\int x e^{\frac{1}{2}x} dx$

6. $\int \frac{x^2 dx}{\sqrt{x-2}}$

7. $\int \frac{3x^2+4x-11}{(x^2-1)(x-2)} dx$.

№20

Знайти

1. $\int \frac{dx}{2^{3x-1}}$.

2. $\int \frac{3^{4x}+2}{3^x} dx$.

3. $\int \frac{dx}{x^2(1-x^2)}$.

4. $\int \frac{dx}{x^2-2x+5}$.

5.

7. $\int \frac{-6x-22}{(x^2+3x+2)(x-3)} dx$.

№22

Знайти

1. $\int \frac{dx}{\sqrt{1-2x^2}}$.

2. $\int \frac{(1+\sqrt{x})^2}{\sqrt[3]{x}} dx$.

3. $\int \frac{dx}{\sqrt{5x^2+1}}$.

4. $\int \frac{4^x-1}{2^x} dx$.

5.

№24

Знайти

1. $\int \frac{dx}{3x+2}$.

2. $\int \frac{dx}{\cos 2x + \sin^2 x}$.

3. $\int \frac{(1-x)^2}{x\sqrt{x}} dx$.

4. $\int \frac{e^{2x}-1}{e^x} dx$.

5.

№25

Знайти

1. $\int \sqrt{5x-3} dx$. 2. $\int \frac{dx}{2x^2-1}$.

3. $\int \frac{dx}{7x-2}$. 4. $\int \frac{dx}{x^2+4x+5}$.

5. $\int 5^{3x-5} dx$.

№26

Знайти

1. $\int \frac{dx}{\sqrt[3]{3x+2}}$. 2. $\int \operatorname{tg}(2x+1) dx$.

3. $\int \cos^2 \frac{x}{4} dx$. 4. $\int \frac{dx}{x^2-4x+3}$.

5. $\int \frac{2x+3}{x-1} dx$.

№27

Знайти

1. $\int \frac{dx}{\sqrt{x^2+4x+3}}$. 2. $\int \operatorname{ctg}(2x-1) dx$.

3. $\int (3x-2)^5 dx$. 4. $\int \frac{(x+1)^2}{\sqrt{x}} dx$.

5. $\int \frac{3^{4x}+2}{3^x} dx$.

№28

Знайти

1. $\int \frac{dx}{5x^2-3}$. 2. $\int \frac{x^2-1}{x^2+1} dx$.

3. $\int \frac{dx}{(3x-1)^7}$. 4. $\int \frac{(2+\sqrt{x})^2}{x} dx$.

5. $\int \frac{dx}{\cos^2 \frac{x}{2}}$.

№29

Знайти

1. $\int \frac{dx}{\sqrt{1-2x^2}}$. 2. $\int (2^x-3)^2 dx$.

3. $\int \frac{dx}{2x^2-3}$. 4. $\int \frac{3x-1}{x+2} dx$.

5. $\int \frac{dx}{\sin^2(3x-1)}$.

№30

Знайти

1. $\int \frac{dx}{\sqrt{3-x^2+2x}}$. 2. $\int (3x+2)\sqrt{3x} dx$.

3. $\int \frac{dx}{3x^2+1}$. 4. $\int \frac{dx}{5x-7}$.

5. $\int \frac{dx}{x^2+2x-3}$.

№31

Знайти

№32

Знайти

$$1. \int \frac{3 + \cos^2 x}{\sin^2 x} dx. \quad 2. \int \sqrt{2x-5} dx.$$

$$3. \int \frac{dx}{\sqrt{2x^2-1}} dx. \quad 4. \int 3^{2x} \cdot 2^{2x+1} dx.$$

$$5. \int \frac{5x+4}{x-3} dx.$$

$$1. \int \frac{(4+x)^2}{x\sqrt{x}} dx. \quad 2.$$

$$3. \int \frac{dx}{9x^2+5} dx. \quad 4. \int \frac{dx}{5^{3x+4}}.$$

$$5. \int \frac{x^2+5}{x^2-2} dx.$$