

Несобственный интеграл

$$1. \int_0^{\infty} \sin x dx.$$

$$2. \int_{-\infty}^{-1} \frac{dx}{x^2}.$$

$$3. \int_{-\infty}^{\infty} \frac{dx}{1+x^2}$$

$$4. \int_0^1 \frac{dx}{x^2}.$$

$$5. \int_{-2}^0 \frac{dx}{4-x^2}.$$

$$6. \int_{-4}^0 \frac{x dx}{9-x^2}.$$

$$7. \int_0^1 x \cdot \ln^2 x dx.$$

$$8. \int_0^2 \frac{x^5 dx}{\sqrt{4-x^2}}.$$

$$9. \int_0^{\infty} x \cdot e^{-x^2} dx.$$

$$10. \int_0^{\infty} \frac{\operatorname{arctg} x}{1+x^2} dx.$$

$$11. \int_0^1 \frac{\ln x}{x} dx.$$

$$12. \int_0^{\infty} x \cdot e^{-x} dx.$$

$$13. \int_0^1 \frac{dx}{\sqrt{x \cdot (1-x)}}$$

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$$1. \int_1^{\infty} \frac{dx}{\sqrt{4-x^2}}.$$

$$2. \int_{-\infty}^0 \frac{dx}{x-1}.$$

$$3. \int_{-\infty}^{\infty} \frac{xdx}{1+x^4}.$$

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

$$5. \int_{-3}^5 \frac{xdx}{9-x^2}.$$

$$6. \int_{-1}^1 \frac{dx}{x^5}.$$

$$7. \int_0^1 \frac{\ln x}{x^2} dx$$