

1. $\int \frac{x^3}{x^4 + 100} dx$

2. $\int \frac{\sqrt{\ln x}}{x} dx$

3. $\int x \cdot \cos x^2 dx$

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

5. $\int \frac{\operatorname{arctg}^{100} x}{1+x^2} dx$