

MATH285 / VV285 Integration Bee

Integration Battle

University of Michigan-Shanghai Jiao Tong University Joint Institute

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JOINT INSTITUTE
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$$\int \sin(101x)(\sin x)^{99} dx$$

$$\frac{1}{100} \sin(100x)(\sin x)^{100}$$

$$\int \sqrt{x \sqrt{x \sqrt{x \cdots}}} dx$$

$$\frac{x^2}{2}$$

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

$$\arcsin(x^2)$$

$$\int x^3 e^{x^2} dx$$

$$\frac{x^2 - 1}{2} e^{x^2}$$

$$\int_0^{\infty} \frac{1}{e^x + 1} dx$$

$$\log 2$$

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

$$\frac{1}{2} \ln(2x^2 + 2x + 1)$$