Regular Round

Integrationbeefjfi 1/8

$$\int_0^{\sqrt{e^2-1}} \frac{x\ln\left(x^2+1\right)}{x^2+1}\,\mathrm{d}x$$

1

$$\int_0^{\frac{\pi}{4}} \sqrt{\tan\left(x\right)}\sec^6\left(x\right)\mathrm{d}x$$

$$\frac{328}{231}$$

$$\int_{\frac{\pi}{6}}^{\frac{\pi}{2}} \left(2\cos\left(2x\right)\ln\left(\sin\left(x\right)\right) + \sin\left(2x\right)\cot\left(x\right)\right) \mathrm{d}x$$

$$\frac{\sqrt{3}}{2}\ln\left(2\right)$$

Regular Round

Integrationbeefjfi 2/8

$$\int_0^{\frac{\pi}{2}} \frac{\mathrm{d}x}{1+\sin^2(x)}$$

$$\frac{\pi}{2\sqrt{2}}$$

Lightninground

Seřaďte následující integrály *vzestupně*

$$\int_{-4}^{2} \sqrt{17 + 4x}\,\mathrm{d}x$$

$$\int_{0}^{\frac{\pi}{3}} \frac{1}{\cos^2(x)}\,\mathrm{d}x$$

$$\int_{1}^{2} (3x + 2)\ln x\,\mathrm{d}x$$

$$\int_0^{\frac{\pi}{3}} \frac{1}{\cos^2(x)} \, \mathrm{d}x \qquad \int_1^2 (3x+2) \ln x \, \mathrm{d}x \qquad \int_{-4}^2 \sqrt{17+4x} \, \mathrm{d}x$$

$$\int_0^{\frac{1}{2}} \frac{x^3 + 2x^2 - 4x + 16}{-2x^3 + 2x^2 - 8x + 8}\,\mathrm{d}x$$

$$-\frac{1}{4}+\frac{3}{2}\ln(2)+2\arctan\left(\frac{1}{4}\right)$$

Regular Round

Integrationbeefjfi 3/8

$$\int_{-1}^{0} \frac{(x-2)(x+0)}{(x+2)(x+5)}\,\mathrm{d}x$$

$$1 + \frac{8}{3}\ln(2) - \frac{35}{3}\ln\left(\frac{5}{4}\right)$$

$$\int_0^{\frac{\pi}{4}} \frac{\mathrm{d}x}{1 - \sin\left(x\right)}$$

$$\sqrt{2}$$

$$\int_0^{\frac{\pi}{4}} \frac{1}{e^{sin(x)}\sqrt{e^{\sin^2(x)}}\sqrt[3]{e^{\sin^3(x)}}\sqrt[4]{e^{\sin^4(x)}}\dots}\,\mathrm{d}x$$

$$\frac{\pi}{4} + \frac{\sqrt{2}}{2} - 1$$

Regular Round

Integrationbeefjfi 4/8

$$\int_{\frac{\pi}{2}}^{\pi} \frac{\sin^2(x)}{(x\cos(x) - \sin(x))^2}\, \mathrm{d}x$$

$$\frac{1}{\pi}$$

$$\int_0^{\ln\sqrt{3}} \frac{e^{2x}+e^{3x}}{e^{2x}+1} e^x \, \mathrm{d}x$$

$$\sqrt{3} - \frac{1}{2}\ln\left(2\right) - \frac{\pi}{12}$$

$$\int_0^1 \sqrt{x - x^2}\,\mathrm{d}x$$

$$\frac{\pi}{8}$$

Regular Round

Integrationbeefjfi 5/8

$$\int_{1}^{\sqrt[15]{2}} \frac{1}{x\sqrt{x^{15}-1}}\,\mathrm{d}x$$

$$\frac{\pi}{30}$$

$$\int_0^{\frac{\pi}{4}} \frac{1 - \tan^2(x)}{\sec^2(x)} \, \mathrm{d}x$$

$$: \frac{1}{2}$$

Lightninground

Seřaďte následující integrály *vzestupně*

$$11\int_{\frac{1}{7}}^{\frac{2}{7}}(1+\cot^2(x))(1-\cos(2x))\,\mathrm{d}x \qquad \int_0^{\pi} 2\sin(x)\,\mathrm{d}x$$

$$\int_0^{\pi} x\sin(x)\,\mathrm{d}x$$

$$\int_0^{\pi} x \sin(x) \, \mathrm{d}x \qquad 11 \int_{\frac{1}{7}}^{\frac{2}{7}} (1 + \cot^2(x))(1 - \cos(2x)) \, \mathrm{d}x \qquad \int_0^{\pi} 2 \sin(x) \, \mathrm{d}x$$

Regular Round

Integrationbeefjfi 6/8

$$\int_0^1 \frac{xe^{2x}}{(2x+1)^2}\,\mathrm{d}x$$

$$\frac{e^2}{12} - \frac{1}{4}$$

$$\int_0^{\frac{\pi}{4}} \frac{\sec^2(x)}{8+\sec^2(x)}\,\mathrm{d}x$$

$$\frac{1}{3}\arctan\left(\frac{1}{3}\right)$$

$$\int_0^{\pi} e^{2x} \sin(3x)\, \mathrm{d}x$$

$$\frac{3}{13}\left(e^{2\pi}+1\right)$$

Regular Round

Integrationbeefjfi 7/8

$$\int_0^{\frac{\pi}{4}} \left(\sin(x) \sqrt[3]{\sin(x)\sqrt{\sin(x)}} \cdot \sqrt[5]{\sqrt{\sin(x)}\sqrt[3]{\sin(x)}} \cdot \sqrt[7]{\sqrt[3]{\sin(x)}\sqrt[4]{\sin(x)}} \cdot \sqrt[9]{\sqrt[4]{\sin(x)}\sqrt[5]{\sin(x)}} \dots \right) \mathrm{d}x$$

$$\frac{\pi}{8} - \frac{1}{4}$$

$$\int_{\frac{3}{2}}^{\frac{3\sqrt{2}}{2}} \frac{\sqrt{4x^2 - 9}}{x} \, \mathrm{d}x$$

$$3 - \frac{3\pi}{4}$$

$$\int_{e}^{e^2} \frac{\ln(x)+1}{x\ln(x)+1}\,\mathrm{d}x$$

$$\ln\left(\frac{(2e^2+1)}{(e+1)}\right)$$

Regular Round

Integrationbeefjfi 8/8

$$\int_{-2}^{2} \sqrt{12 - 3x^2}\,\mathrm{d}x$$

$$2\pi\sqrt{3}$$

$$\int_{1}^{\sqrt{2}} \frac{\ln\left(1+x^{4}\right)}{x^{3}}\,\mathrm{d}x$$

$$\arctan\left(2\right) - \frac{\pi}{4} + \frac{1}{4}\ln\left(\frac{4}{5}\right)$$

$$\int_0^{\frac{\pi}{4}} \left(\sec^2(x)\ln(\cos(x)) - \tan^2(x)\right) \mathrm{d}x$$

$$-\frac{1}{2}\ln(2)$$

Quarterfinals

Integrationbeefjfi 1/4

$$\int_0^{\frac{\pi}{2}} \frac{\sec(x)}{2\sec(x)+1}\,\mathrm{d}x$$

$$\frac{\pi}{3\sqrt{3}}$$

$$\int_0^{\frac{\pi}{2}} \frac{1}{1+\tan^5(x)}\,\mathrm{d}x$$

$$\frac{\pi}{4}$$

$$\int_0^1 \ln^6(x)\,\mathrm{d}x$$

720

Quarterfinals

Integrationbeefjfi 2/4

$$\int_0^\infty \frac{x^{1010}}{(1+x)^{2022}}\,\mathrm{d}x$$

$$\frac{\Gamma(1011)^2}{\Gamma(2022)} = \frac{1010!1010!}{2021!}$$

$$\int_0^\infty \frac{2\sin(x)\cos(x)}{2x}\,\mathrm{d}x$$

$$\frac{\pi}{4}$$

$$\int_{-\infty}^{\infty} \frac{\mathrm{d}x}{(1+x^2)(1+e^x)}$$

$$\frac{\pi}{2}$$

Quarterfinals

Integrationbeefjfi 3/4

$$\int_{-1}^{1} \frac{\cos(x)}{1+e^{\frac{1}{x}}}\,\mathrm{d}x$$

$$\sin(1)$$

$$\int_0^1 \frac{\ln(x)}{1 - x^2}\,\mathrm{d}x$$

$$-\frac{\pi^2}{8}$$

$$\int_0^{2\pi} \frac{\mathrm{d}x}{2+\cos\left(x\right)}$$

$$\frac{2\pi}{\sqrt{3}}$$

Quarterfinals

Integrationbeefjfi 4/4

$$\int_0^\infty \frac{\sqrt{1+\sin(x)}-\cos\left(\frac{x}{2}\right)}{x}\,\mathrm{d}x$$

$$\frac{\pi}{2}$$

$$\int_0^1 \sin(x)\cos(1-x)\,\mathrm{d}x$$

$$\frac{\sin(1)}{2}$$

$$\int_0^1 \frac{\ln\left(1-x\right)}{x}\,\mathrm{d}x$$

$$-\frac{\pi^2}{6}$$

Semifinals

Integrationbeefjfi 1/2


账号：馨园民族餐厅
密码：结果取前8位
$\int_{-2}^{2}\left(x^3\cos\frac{x}{2}+\frac{1}{2}\right)\sqrt{4-x^2}\,dx$
WIFI
南航饮食服务中心

π

$$\int_0^\infty \left(\sin\left(\frac{1}{x}\right) - \frac{1}{\pi}\sin\left(\frac{\pi}{x}\right)\right) \mathrm{d}x$$

$$\ln(\pi)$$

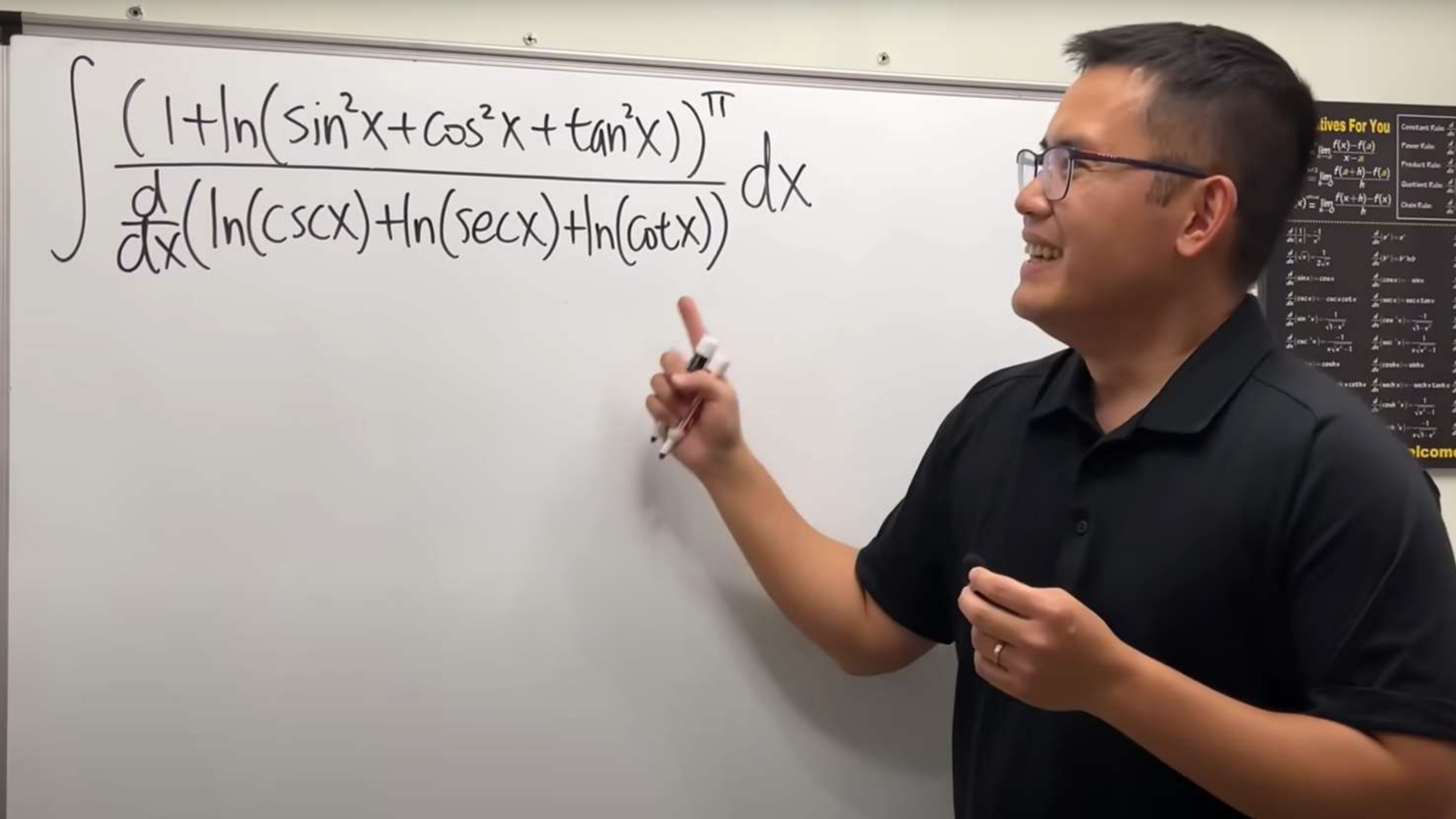
$$\int_0^{2\pi} \frac{\sin(10x)}{\sin(x)}\,\mathrm{d}x$$

0

Semifinals

Integrationbeefjfi 2/2

!



$$\int \frac{\left(1+\ln\left(\sin^2 x+\cos^2 x+\tan^2 x\right)\right)^{\pi}}{\frac{d}{dx}\left(\ln(\csc x)+\ln(\sec x)+\ln(\cot x)\right)}\,dx$$

$$-\frac{1}{4(\pi+1)}(1+\ln(\sec^2(x)))^{\pi+1}$$

$$\int_0^e \{x\} e^{\lfloor x \rfloor} \, \mathrm{d}x$$

$$\frac{1 + e + e^2(e - 2)^2}{2}$$

$$I_1 = \int_{I_2+I_3}^{I_4+I_5} \left(x - \frac{3}{2}\right)^2 \mathrm{d}x,\ I_2 = \int_0^1 t\,\mathrm{d}t,\ I_3 = \int_0^{\frac{\pi}{4}} \sin(t)\,\mathrm{d}t,\ I_4 = \int_1^2 t\,\mathrm{d}t,\ I_5 = \int_{\frac{\pi}{4}}^{\frac{\pi}{2}} \sin(t)\,\mathrm{d}t$$

$$\frac{\sqrt{2}}{6}$$

Boj o třetí místo

Integrationbeefjfi

$$\int_{-\pi}^{\pi} \frac{1-\cos(x)}{1-2^x}\,\mathrm{d}x$$

π

Final

Integrationbeefjfi

$$\int_0^{\pi} \max\left(\min\left(\frac{2x}{\pi}, \sin\left(x\right)\right), \min\left(1 - \frac{2x}{\pi}, \cos\left(x\right)\right)\right) \,\mathrm{d}x$$

$$\frac{3\pi}{8} + 1$$