Integration Bee Appetizers

Week −1 Bee Food

Time Cost

$\oint$	Easy
$\oint\oint$	Medium
$\oint\oint\oint$	Hard
$\oint\oint\oint\oint$	Impossible

Chef's Recommendations

Half-Baked Brownie $\oint$

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

Oil Noodles $\oint\oint$

$$\int e^{\sin x} \sin 2x \, \mathrm{d}x$$

Number Soup $\oint\oint\oint$

$$\int \frac{x^8}{(x^3+1)^4} \, \mathrm{d}x$$

Pizza Pi $\oint\oint\oint\oint$

$$\int_0^{\infty} \left(\tan^{-1}(x^2) - \frac{\pi}{2}\right) \, \mathrm{d}x$$

Specials

Classic French Onion Soup $\oint$

$$\int \frac{1}{x + x^{2026}} \, \mathrm{d}x$$

Vinculum Tuna Sandwich $\oint\oint$

$$\int_1^{\infty} \frac{\ln(x-1)}{x\sqrt{x-1}} \, \mathrm{d}x$$

Diabetes Inducing Cream Puff $\oint\oint\oint$

$$\int_0^{\frac{\pi}{2}} \sin^5(2x) \sin\left(x + \frac{5\pi}{4}\right) \, \mathrm{d}x$$

We Forgot To Name This One $\oint\oint\oint\oint$

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

Hot & Spicy

Tangy Coconut Spicy Shrimp $\oint$

$$\int \tan x \operatorname{cosec}^2 x \, \mathrm{d}x$$

Chili Countdown Burger $\oint\oint$

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

Sichuan Hot Pot $\oint\oint\oint$

$$\int e^x \sin x \sin(x + \tan^{-1} 2) \, \mathrm{d}x$$

Inside-Out Hot wings $\oint\oint\oint\oint$

$$\int_0^1 \ln x \sin^3(\ln x) \, \mathrm{d}x$$

Sweet Treats

Fruit Tart Square $\oint$

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

Gauss Gingerbread $\oint\oint$

$$\int_1^{\infty} \frac{1}{x^2\sqrt{\ln x}} \, \mathrm{d}x$$

Eulerian Éclair $\oint\oint\oint$

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

Massachusetts Inspired Tiramisu $\oint\oint\oint\oint$

$$\sum_{k=1}^{\infty} \int_k^{\infty} \frac{1}{4x^3 - x} \, \mathrm{d}x$$