

integration bee joes disciples ALL ANSWERS

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1 Introduction

integration . ALL CAPITAL LETTERS ARE CONSTANTS OF INTEGRATION.

2 answers

1. sum the powers and get $x^{e-2} + U$.
3. $0.1\dot{6}$
7. see answer to 22
4. $\frac{\pi}{4} \ln 1$
14. $\frac{\pi}{2} \ln(7971)$
15. $x + \frac{1}{1+\tan(0.5x)}$
17. $\frac{54-4\sqrt{3}}{24} \cdot \pi - 2$
18. sub $x = \cos^2(\theta)$ to get $x\sqrt{\frac{1}{x}-1} - \arctan(\frac{1}{x}-1) + Z$.
20. $0.5x\sqrt{x^2-1} - 0.5\operatorname{arccosh}(x) + C$
22. did loads of symmetry subs and got $\frac{\pi \ln(2)}{8}$ (plus a constant $E = 0$).
24. let $x = \sin \theta$ and trivially get $x - \sqrt{1-x^2} \arcsin(x) + E$ (E is not necessarily 0).
27. $\frac{\pi}{2b} e^{ba}$
28. trivially $(1 + \sqrt{2}) \ln(2) + N$.

29. draw graph and sum ne^{-n} , get $\frac{e}{e^2-2e+1}$.
30. big fat 0.
31. bruh epic summation after subbing $1/x$, gives $\frac{\pi^2}{6} - 1$!?
32. trivial by feynman+ngl i already knew result $\sin x/x$ 0 to infty but anyway i think it's $\frac{\pi(a-b)}{2}$.
34. convert to exponential and sub $e^{**}(2x)$, gives $\boxed{2}$.
39. $\frac{1}{\sqrt{2}} \arctan \frac{1}{\sqrt{2}} \tan(2x) + D$ by trig identities and squaring ($\sin^2 + \cos^2$)