Integration Bee practice - for extra credit (12 points), due 4/25/18

Name: _____

1. $\displaystyle\int \frac{1}{3x^2}\, dx =$

2. $\displaystyle\int_0^1 \sqrt{x}(x^2 + 2)\, dx =$

3. $\displaystyle\int \frac{\sqrt{x} + 3x}{x^3}\, dx =$

4. $\displaystyle\int \frac{2018}{\sec x}\, dx =$

5. $\displaystyle\int \frac{x^{2018} + x^{2016}}{x^{2017}}\, dx =$

6. $\displaystyle\int_0^1 \frac{x^{2017}}{x^{2018} + 1}\, dx =$

7. $\displaystyle\int \sin x \sin(\cos x)\, dx =$

8. $\displaystyle\int (5x - 2018)^{19}\, dx =$

9. $\displaystyle\int \frac{\sin^2 x}{1 - \cos^2 x}\, dx =$

10. $\displaystyle\int (e^{x+1})^5\, dx =$

11. $\displaystyle\int \frac{2}{4 + x^2}\, dx =$

12. $\displaystyle\int xe^{-x^2+2018}\, dx =$

13. $\displaystyle\int \frac{2x+3}{\sqrt{(x+1)(x+2)}}\, dx =$

14. $\displaystyle\int \frac{2(x+3)}{x^2+6x+9}\, dx =$

15. $\displaystyle\int 10^{\log_{10}(x^2+5)}\, dx =$

16. $\displaystyle\int e^{2x}\cdot \sqrt{e^{-3x}}\, dx =$

17. $\displaystyle\int_0^1 \frac{x-4}{\sqrt{x}+2}\, dx =$

18. $\displaystyle\int 2^{x+1}3^{x+1}\, dx =$

19. $\displaystyle\int (1+x+x^2)^2(1-x)^2\, dx =$

20. $\displaystyle\int \frac{2018}{x\sqrt{1-(\ln x)^2}}\, dx =$

21. $\displaystyle\int \frac{1}{9x^2+25}\, dx =$

22. $\displaystyle\int_0^3 \sqrt{9-x^2}\, dx =$

23. $\displaystyle\int \ln(2e^{x^2+1})\, dx =$

24. $\displaystyle\int \frac{x^2}{\sqrt{x+1}}\, dx =$