

Warm-up problems for the Integration Bee!

1. $\int \frac{dx}{x \ln(x)}$

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

3. $\int x^3 \sin(x^2) dx$

HINTS

1. u-sub with $u = \ln(x)$
2. complete the square in the denominator and then use trig-sub
3. u-sub with $u = x^2$ and then use parts