

Quiz 11

Name: _____

1. Evaluate these integrals. IBP formula: $\int f g' dx = f g - \int f' g dx$.

(a) $\int \tan(x) dx$

= $-\ln |\cos(x)| + C$ by writing $\tan(x) = \frac{\sin(x)}{\cos(x)}$ and subbing $u = \cos(x)$.

(b) $\int x^3 \ln(x) dx$

A single IBP gives $I = \frac{1}{4}x^4 \ln(x) - \frac{1}{16}x^4 + C$. Remember to do algebra on the resulting integral; $\frac{1}{x}x^4 = x^3$ which you can integrate using the power rule!