

Name: _____

Date: _____

Period: _____ 2016

AP Calculus – Worksheet – Integration by Parts

1. $\int x^2 \ln x \, dx$

4. $\int \frac{e^{\sqrt{x}}}{\sqrt{x}} \, dx$

2. $\int x \tan^{-1} x \, dx$

5. $\int 5^x x \, dx$

3. $\int x \sin x \, dx$

6. $\int x \ln x^2 \, dx$

7. $\int \frac{\ln x}{x^2} dx$

9. $\int e^x \sin x dx$

8. $\int \sin^{-1} x dx$

10. $\int_1^2 x e^x dx$

11. Find the area enclosed by the graphs of $y = x \sin x$, $y = \pi - x$, and the y-axis.

