DATE: _____

Integration by Parts Practice

1. The integral $\int \frac{1}{x \ln x} dx$ can be found by:

(a) making the substitution $u = \ln x$

(b) making the substitution $u = \frac{1}{x}$

(c) using integration by parts, with $u = \ln x$ and $dv = x\, dx$

(d) taking the reciprocal of $\int x \ln x\, dx$

(e) none of the above

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2. The integral $\int x \sin x\, dx$ can be found by:

(a) making the substitution $u = x$

(b) making the substitution $u = \sin x$

(c) using integration by parts, with $u = \sin x$and $dv = x\, dx$

(d) using integration by parts, with $u = x$ and dv $dv = \sin x\, dx$

(e) none of the above

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

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4. $\int x^3 \cos x\, dx$

5. $\int_0^1 (7-3x)e^{6x}\,dx$

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6. $\int e^{3x}\cos x\,dx$

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7. The function f is continuous and $f(0)=1, f(2)=5$, and $\int_0^2 f(x)dx = 3$. Find $\int_0^2 x\,f'(x)\,dx$