MATH 2300, Calc 2

Calculating integrals - the big picture

January 15, 2015

Techniques you know so far:

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What technique do you think would work best?

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u/du substitution, $u = \sqrt{x}$, $du = \frac{1}{2\sqrt{x}} \, dx$

What technique do you think would work best?

$$\int x \ln x \, dx$$

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Integration by parts,

What technique do you think would work best?

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Integration by parts, $u = \ln x$, $dv = x \ dx$

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u/du substitution, $u = \arcsin x$, $du = \frac{1}{\sqrt{1-x^2}} \, dx$

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Integration by parts, $u = x^2$, $dv = \sin x \, dx$

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u/du substitution, $u = x^2$, $du = 2x \, dx$