MTH 32 LECTURE NOTES (Ojakian)
Topic 7: Integration By Parts

OUTLINE

(References: 3.1)

1. Integration by Parts

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1. <u>The "Integration By Parts" Formula</u>

$$\int u \ dv = uv - \int v \ du$$

PROBLEM 1. *Evaluate:*
$$\int xe^{x^2} \ dx$$

PROBLEM 2. *Evaluate:*
$$\int xe^x \ dx$$

PROBLEM 3. *From* TEXTBOOK *do section 3.1: 8, 10, 26*

2. <u>Applications</u>

PROBLEM 4. *Find the volume of rotating a hump of the sin curve around the y-axis.*

PROBLEM 5. *From* TEXTBOOK *do section 3.1: 62*

3. <u>Practice Problems</u>

PROBLEM 6. *From* TEXTBOOK *do section 3.1: 13, 14, 16*