Discussion Problems for Math 180

Tuesday, November 25, 2014

Find the following indefinite integrals. In most cases you will want to make a substitution of variables.

1. $\displaystyle \int \sin(8x)\,\mathrm{d}x$

2. $\displaystyle \int (x-3)^{16}\,\mathrm{d}x$

3. $\displaystyle \int xe^{x^2}\,\mathrm{d}x$

4. $\displaystyle \int \sin^5(x)\cos(x)\,\mathrm{d}x$

5. $\displaystyle \int x^4 \cdot \sqrt[3]{x^5-1}\,\mathrm{d}x$

6. $\displaystyle \int \frac{2\,\mathrm{d}x}{7-x}$

7. $\displaystyle \int \frac{x^3\,\mathrm{d}x}{x^2+1}$

8. $\displaystyle \int \frac{2x}{\sqrt{1-3x}}\,\mathrm{d}x$

9. $\displaystyle \int \frac{8\,\mathrm{d}x}{5+x^2}$

10. $\displaystyle \int \frac{\ln(x)}{x}\,\mathrm{d}x$