Mathematics for Political Science

Lecture 3: Calculus I

Exercise Solutions

1.

    1. -4

    2. -5

    3. 1.6

    4. 2

2.

    1. 9

    2. 3

    3. 1

3.

    a. $x^{-\frac{2}{3}}$ b. 14 c. $3y^2 + 6y$

    d. $5x^4 + 3x^2 - 2x$ e. $1 + 3y^2 + \frac{14}{y^3}$ f. $2y + y^{-2} - 3y^{-4}$

    g. $\frac{12x^2 - 8x + 16}{x^4 - 8x^3 + 16x^2}$ h. $e^{y^2 - 3y + 2}(2y - 3)$ i. $\frac{2}{x}$

4. $4(8(x^4 + 2) - 1) * 8 * 4x^3$