

MATH 426 - Assignment 7 Part I

June 23, 2008

1 Logical Subscripting

Use logical subscripting to compute and plot the following piecewise function in the interval $[0, 4]$.

$$f(x) = \begin{cases} 2x & \text{if } x \leq \frac{1}{2}, \\ -2(x-1) & \text{if } \frac{1}{2} < x \leq 1, \\ \ln(x), & \text{if } x > 1. \end{cases} \quad (1)$$

2 More Logical Subscripting

Use logical subscripting to compute and plot the following piecewise function in the domain $[0, 2] \times [0, 2]$

$$f(x, y) = \begin{cases} xy & \text{if } x < 1 \text{ and } y < 1 \\ -y(x-2) & \text{if } x \geq 1 \text{ and } y < 1 \\ (x-2)(y-2), & \text{if } x \geq 1 \text{ and } y \geq 1 \\ -x(y-2), & \text{if } x < 1 \text{ and } y \geq 1 \end{cases} \quad (2)$$