# The Absolute Value Function

UNIVERSITY OF MINNESOTA

# Preliminaries and Objectives
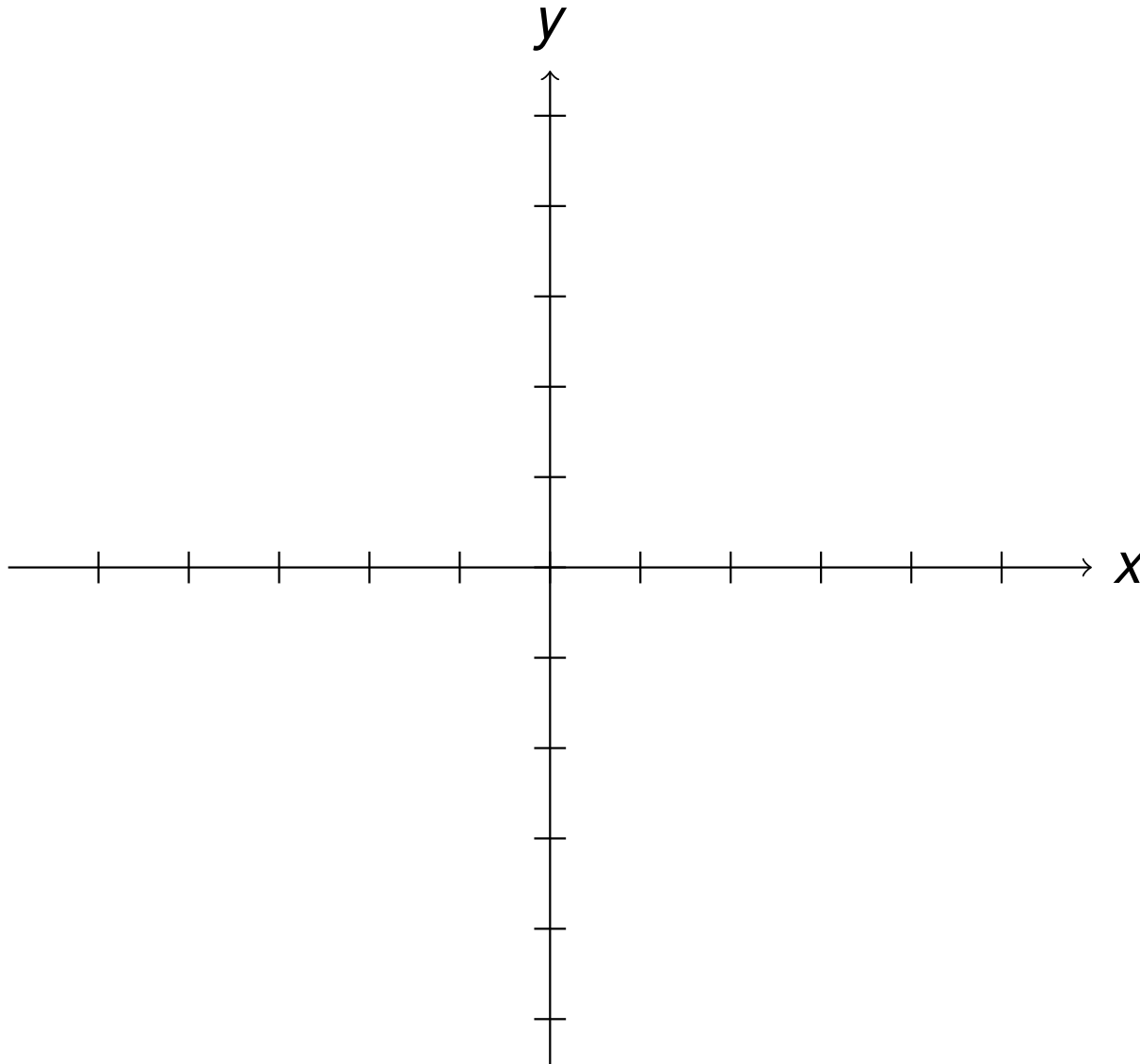
Preliminaries

- Equations of Lines
- Piecewise Defined Functions

Objectives

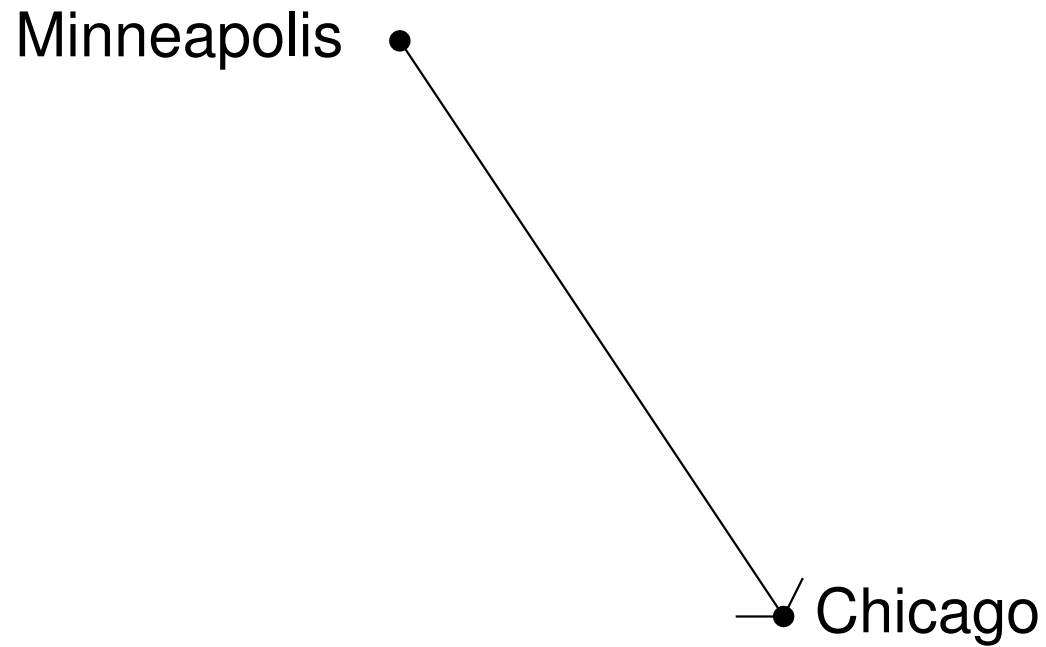- Define the absolute value function

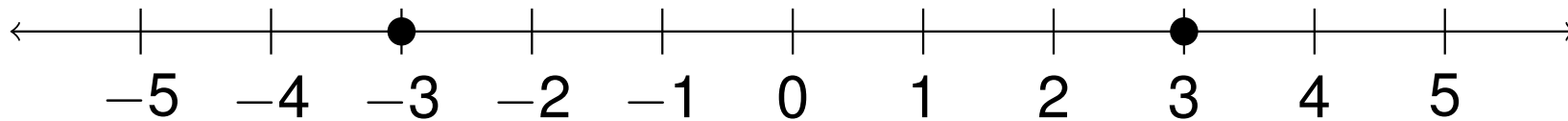# Cartesian Coordinate System

Minneapolis ●

Chicago ●

# Length-Direction Navigation on the Number Line

# Definition of Absolute Value

## Absolute Value

$$|x| = \begin{cases} x & \text{if } x \geq 0 \\ -x & \text{if } x < 0 \end{cases}$$