

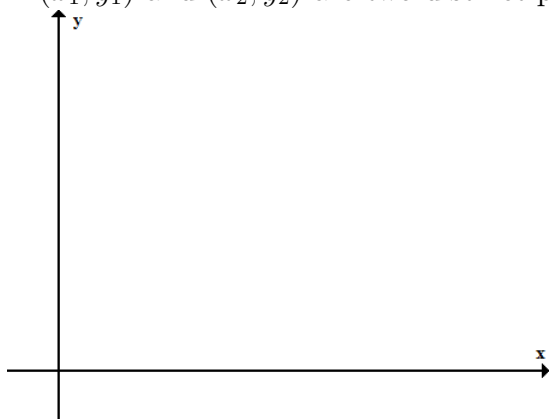
# MATH 210 FINITE MATHEMATICS

BRIAN VEITCH • FALL 2016 • NORTHERN ILLINOIS UNIVERSITY

## 1.2 Lines and Slopes

### Definition 1: Slope of a Line

If  $(x_1, y_1)$  and  $(x_2, y_2)$  are two distinct points, then the slope  $m$  is



### Definition 2: Different Forms for a Line

**Point-Slope Form**

**Slope-Intercept Form**

**Example 1**

Find the slope of the line that passes through the points  $(-2, 2)$  and  $(3, -1)$ , the equation of the line, and then sketch.

**Definition 3: Perpendicular and Parallel Lines**

Suppose you have two lines  $L_1$  and  $L_2$  with slopes  $m_1$  and  $m_2$ .

**Example 2**

Find an equation of the line that passes through the point  $(-1, 3)$  that is perpendicular to  $y = -\frac{2}{3}x + 4$ .

