**Chapter 10 – Topics in Analytic Geometry**

**PreCalculus 10.1 Lines**

**Equation of a line:**

*m* = slope, *b* = *y*-intercept

**Inclination**: the positive angle (between 0° and 180°) measured counterclockwise from the *x*-axis to the line.

Examples:

142°

32°

**Inclination and Slope**

If a non-vertical line has inclination and slope *m*, then

**Finding the Inclination of a Line**

Ex: Find the inclination of the line:

or radians

Ex: Find the inclination of the line:

**Angle Between Two Lines**

If two non-perpendicular lines have slopes and , the angle between the lines is:

Ex: Finding the angle between two lines:

Line 1: Line 2:

(or )

Example: Find the angle between the lines:

**The Distance Between a Point and a Line**

The distance between a point and the line is:

Example: Find the distance between the point and the line

units

Example: Find the distance between the point and the line