**8.5 Applications of Determinants**

**Area of a Triangle**

A triangle with vertices , and has area =

(use ± to ensure that the area is a positive number)

Ex: Find the area of a triangle whose vertices are , and .

Area =

**Test for Collinear Points**

Three points , and are collinear if and only if

Ex: Determine whether the points , and are collinear.

**Two-Point form of the Equation of a Line**

The equation for a line through the points and is:

Ex: Find an equation of the line through and .

Expand using Row 1: