Beginning Algebra ~ Lesson 22
Work the following examples as you listen to the recorded lecture.

Slope Rule for Linear Equations

Slope of a linear equation is really the direction of the line. We also think of slope as the slant or steepness of a line, and it can be measured. As you have seen in earlier instruction, slope is equal to the vertical change in a line (called the rise) over the horizontal change (called the run). Therefore you may think of slope as the change in y over the change in x. Since we can define and measure slope in terms of changes in y and x, we can also calculate slope from two points on the same line. Take a close look at the following examples:

Two Points on a Line	Calculations for Slope
$(3,1)$ and $(4,-2)$	$m = \dfrac{-2-1}{4-3} = \dfrac{-3}{1} = -3$
$(-2,0)$ and $(1,5)$	$m = \dfrac{5-0}{1-(-2)} = \dfrac{5}{3}$
$(4,3)$ and $(-1,-2)$	$m = \dfrac{-2-3}{-1-4} = \dfrac{-5}{-5} = 1$
$(0,6)$ and $(4,-2)$	$m = \dfrac{-2-6}{4-0} = \dfrac{-8}{4} = -2$

Use the Slope Rule to calculate the slope for the following lines.

Two Points on a Line	Calculations for Slope
$(4,3)$ and $(-1,-2)$	$m =$
$(0,6)$ and $(4,-2)$	$m =$
$(2,-1)$ and $(3,-6)$	$m =$
$(5,0)$ and $(-4,2)$	$m =$