Examining Slope with Ski Bird

Slope can be expressed as:
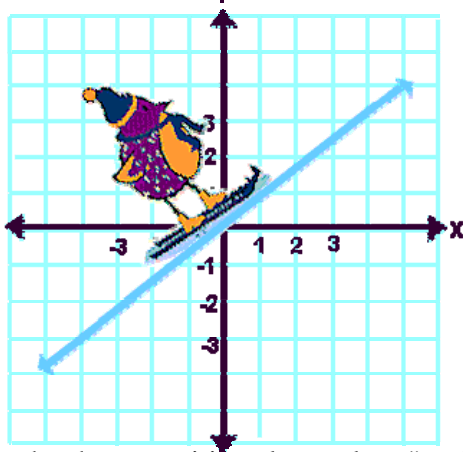
change in *y*
over   or $\dfrac{y_2 - y_1}{x_2 - x_1}$ or $\dfrac{rise}{run}$
change in *x*.

Ski Bird will try to help you remember how slope applies to straight lines.

Ski Bird
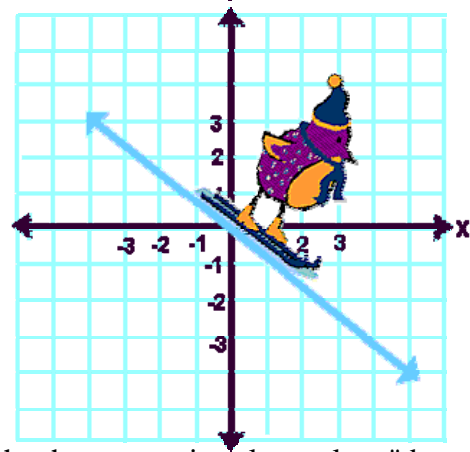
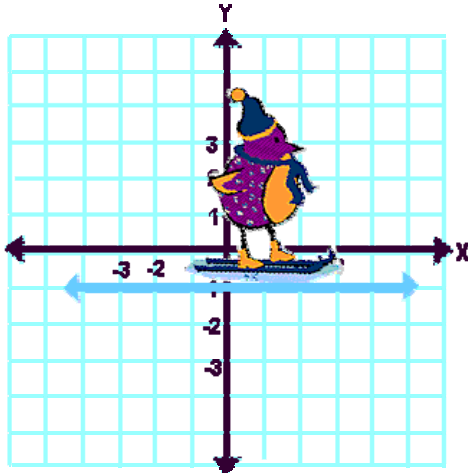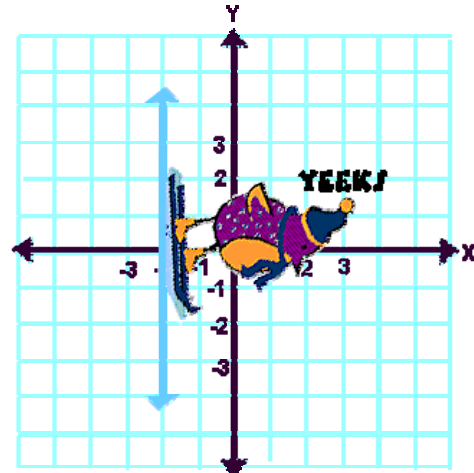|	
## Positive Slope	## Negative Slope
Lines that have positive slope, slant "up hill" (as viewed from left to right). Ski Bird has to work hard to make it up the hill. He needs to exert more positive (+) energy to get up the hill.	Lines that have negative slope, slant "down hill" (as viewed from left to right). Ski Bird enjoys the ride down the hill. He needs to decrease (-) energy to try to slow down.
## Zero Slope	## No Slope or Slope Undefined
Lines that are horizontal have zero slope. Ski Bird is cross-country skiing on level ground. He is not working hard to get up a hill, nor is he trying to slow down. His energy level (and his enjoyment level) is at zero.	Vertical lines have no slope, or undefined slope. Ski Bird cannot ski vertically. Sheer doom awaits Ski Bird at the bottom of a vertical hill.