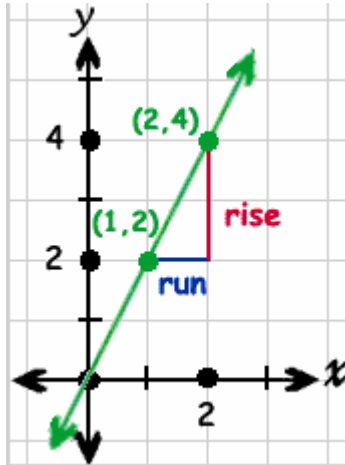


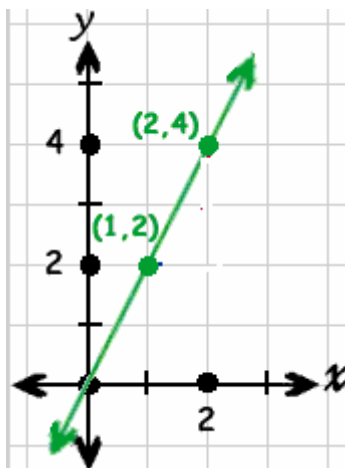
Slope

Slope is defined as the change in the y-coordinates divided by the change in the x-coordinates. People often remember this definition as "**rise/run**." In this picture, the change in y-coordinates (rise) is red, and the change in x-coordinates (run) is blue:



If we name our first point (x_1, y_1) and our second point (x_2, y_2) , we can write a formula as: *Note that we could have done the points in the opposite order, and we will come up with the exact same answer:*

$$m = \frac{y_2 - y_1}{x_2 - x_1} \begin{matrix} \text{rise} \\ \text{run} \end{matrix}$$

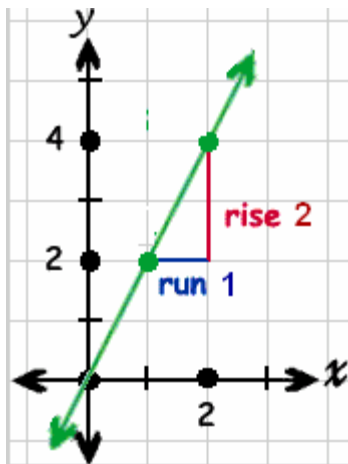


Rise $y_2 - y_1$
 $4 - 2 = 2$ rise

Run $x_2 - x_1$
 $2 - 1 = 1$ run

Slope or $M = \frac{\text{rise } 2}{\text{run } 1} = 2$

Another way to compute the slope is to form a right triangle between the 2 points. See below ---the vertical side is the **rise** and the horizontal side is the **run**. Simply count the squares of each and you have the rise and the run. Then compute the slope ---2/1 or 2



Let's find the slope of line equation: $y = 2x - 1$ When the equation is in this form the number next to the x a (2) is the slope--rise of 2 and a run of 1. The -1 in the equation is where the slope line crosses the Y axes. See below Compute the slope is to form a right triangle between the 2 points.

