SLOPE:

- Ratio of the change in y-direction to change in x-direction
- Commonly used as a rate of change
  miles per hour

$$\text{ski run - } \frac{rise}{run}$$

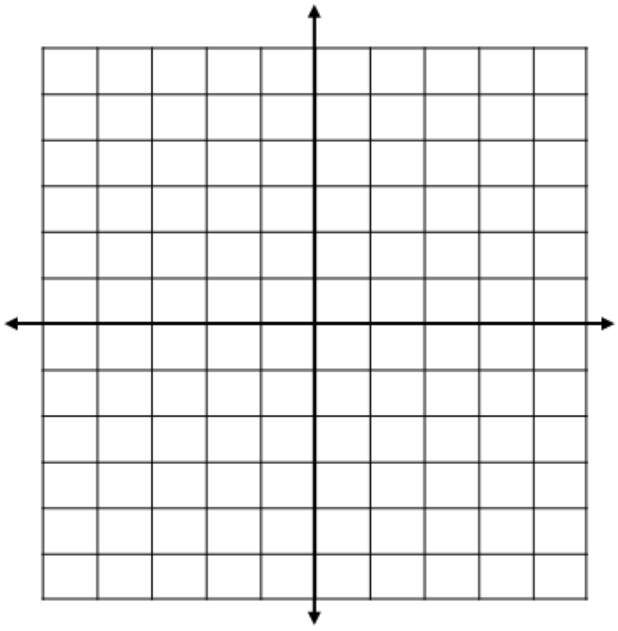
Enrollment increase/decrease

To calculate a slope, you need to find 2 ordered pairs of data (x_1, y_1) (x_2, y_2)

$$slope = m = \frac{y_2 - y_1}{x_2 - x_1}$$

Example 1:
If a line passes through (1, 30) and (-2, -3), find the slope of the line.

Example 2
If a line passes through (1, -3) and has slope = $-\frac{1}{2}$, graph the line.

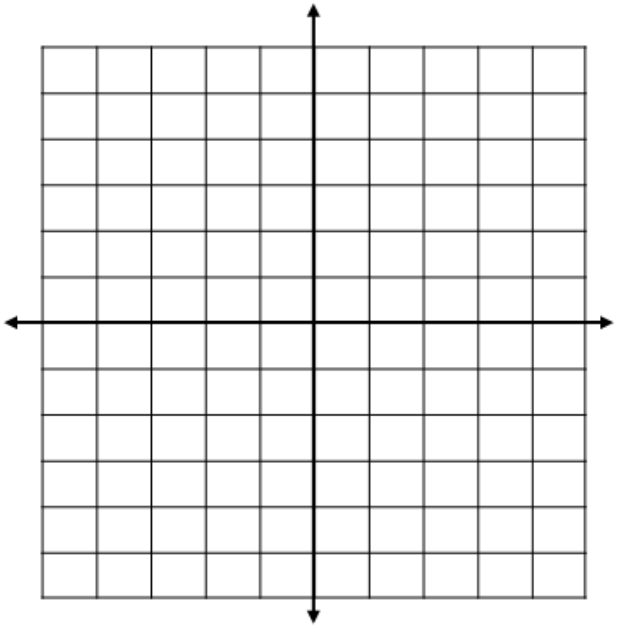


Rising line has positive/negative slope.

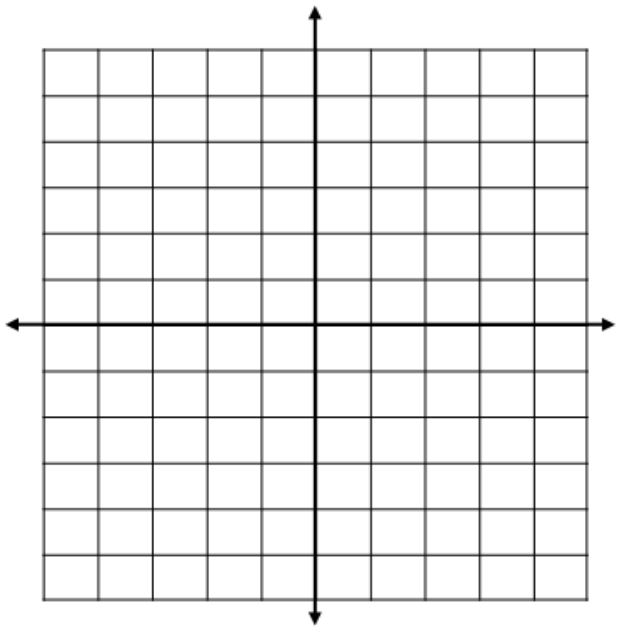
Falling line has positive/negative slope.

Parallel lines have _____ slope.

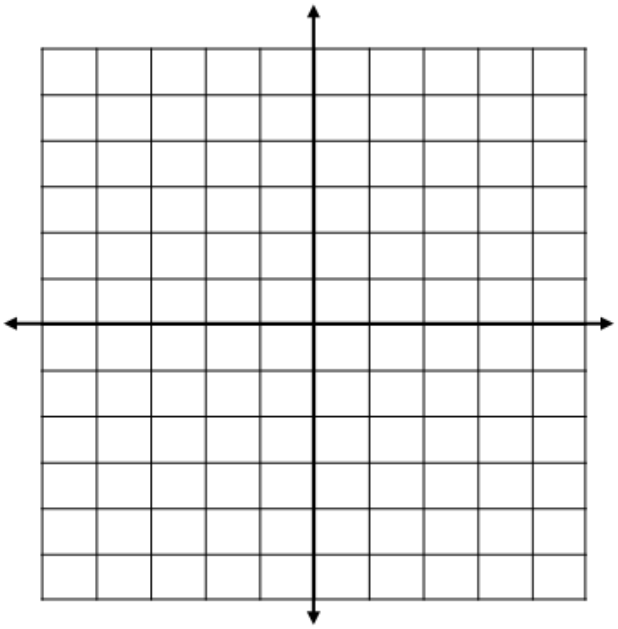
Moving at same rate.



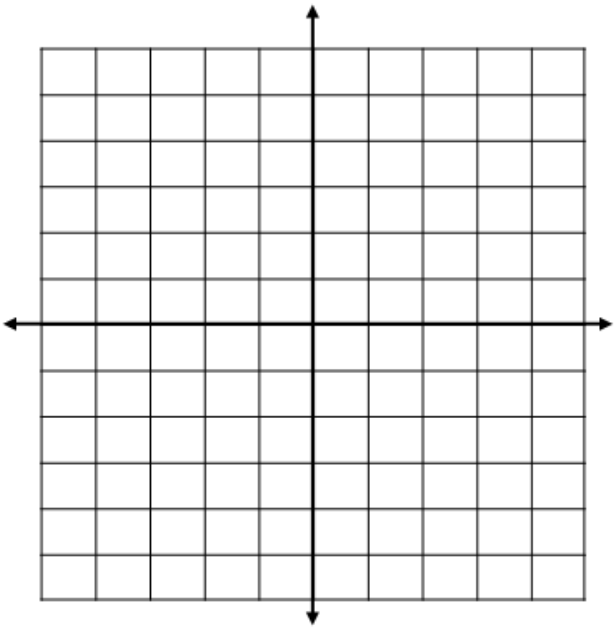
Perpendicular lines have _____ slope.



Vertical lines have _____ slope.



Horizontal lines have _____ slope.



Naomi left from an elevation of 7400 ft at 7:00am and hiked to an elevation of 9800 feet by 11:00am. What was her rate of change?