

variable - a letter or symbol that represents a value that can change  
Example perimeter of a rectangle has the formula  
 $p = 2(h + w)$  h and w are variables

this is a coordinate grid has a horizontal axis that is the x axis and a vertical axis that is the y axis

**Variable** a quantity that can change. Letters are often used as symbols to represent variables in rules or equations that describe patterns

Example in the expression  $5n$   $n$  represents a variable or a quantity that can change.

**Range:** the difference between the high and low numbers

**coordinate graph** - a graphical representation of pairs of related numerical values that shows the relationship between two variables. It relates the independent variable (shown on the x-axis) and the dependent variable (shown on the y-axis)

x axis - horizontal axis on the coordinate graph

y axis is the vertical axis on the coordinate graph

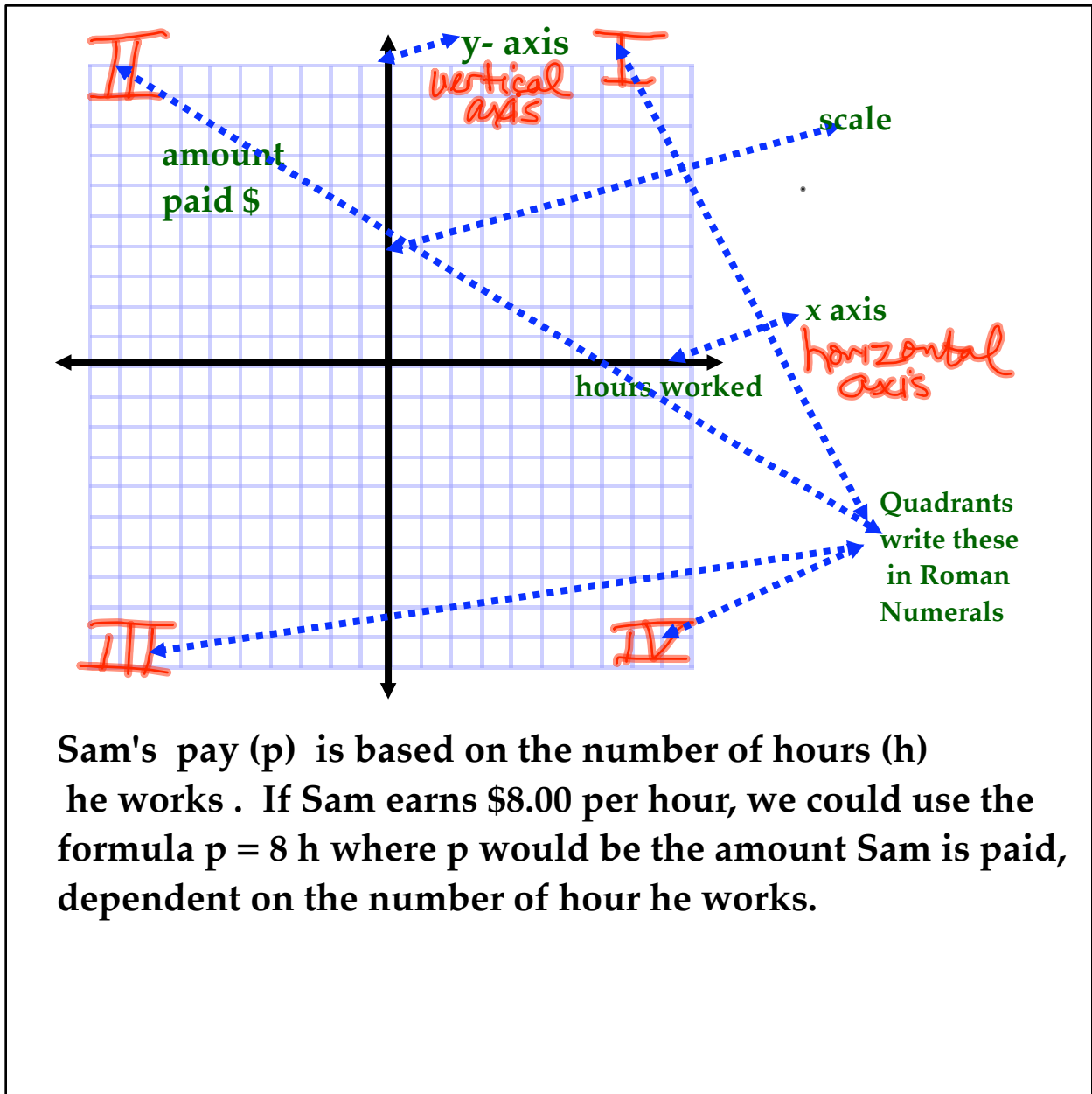
**coordinate pair** represents a point on a line and is written in the form  $(x, y)$

**dependent variable** - one of the two variables in a relationship. Its value depends upon or is determined by the other variable called the *independent variable*. For example the cost of a long-distance phone call (dependent variable) depends on how long you talk (independent variable)

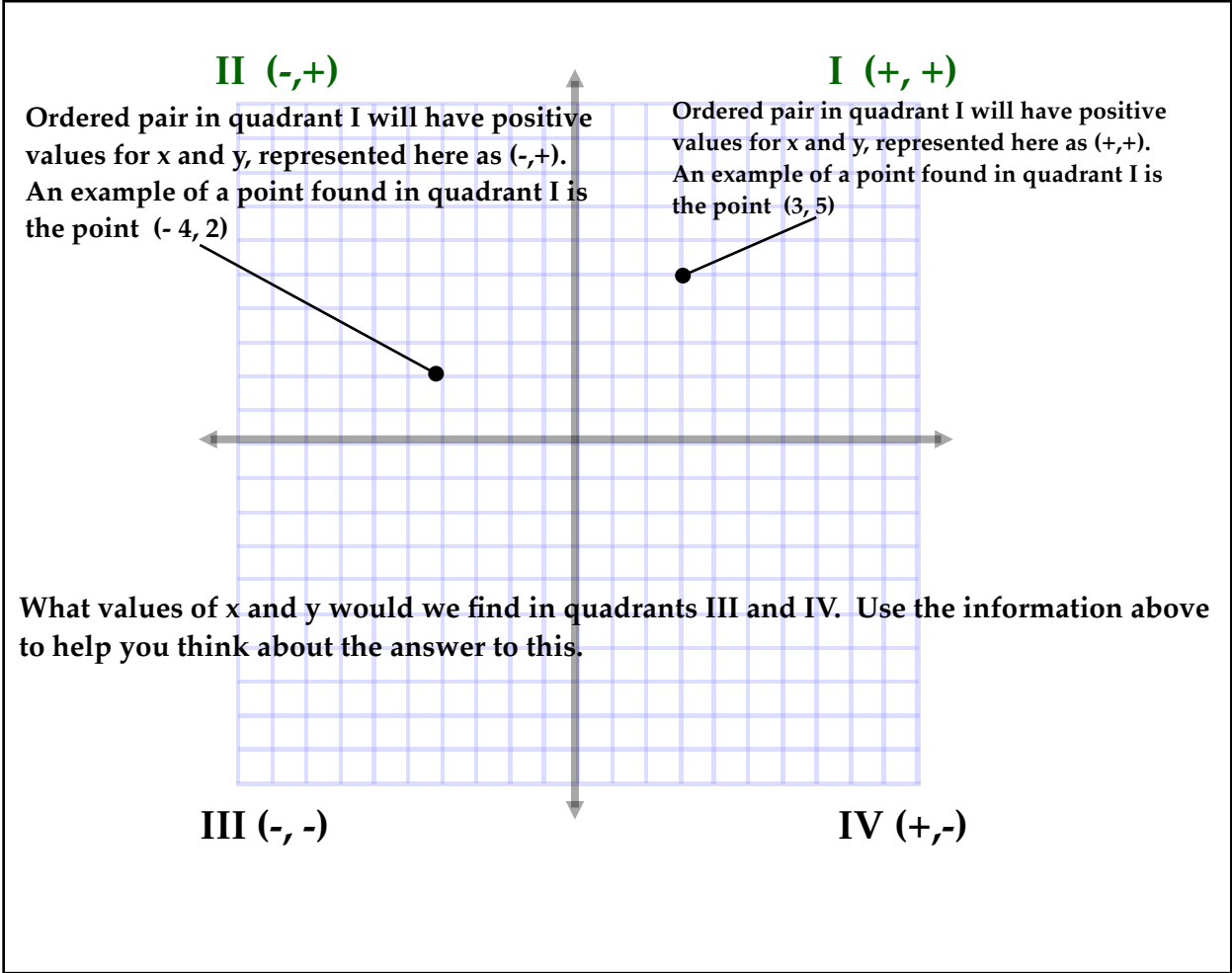
**independent variable** - One of the two variables in a relationship. Its value determines the value of the other variable called the dependent variable. If you organize a bike tour, for example, the number of people who register to go (independent variable) determines the cost for renting bikes (dependent variable)

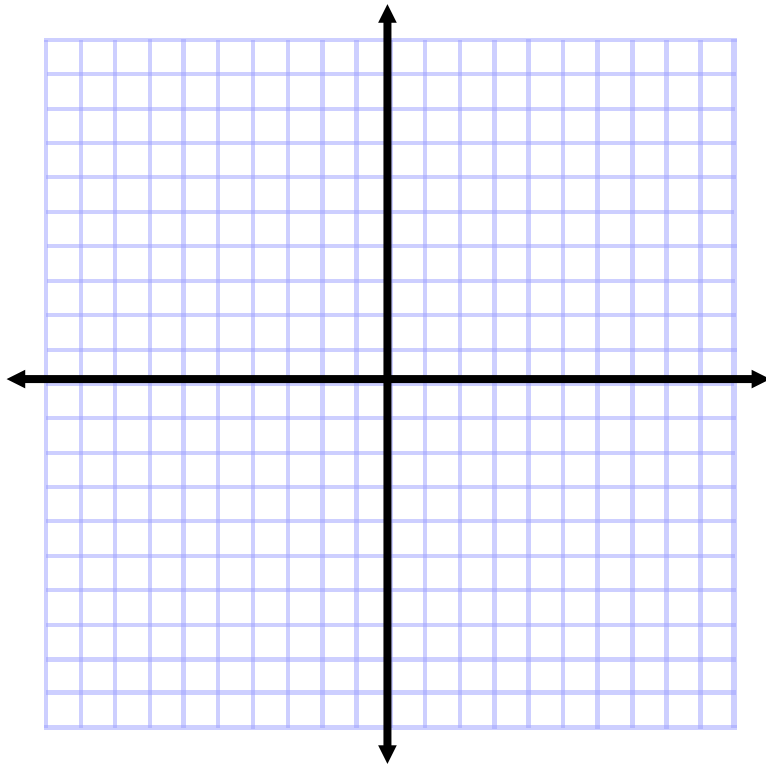
**scale** a labeling scheme used on each of the axes on a coordinate grid.

**relationship** - An association between two or more variables. If one of the variables changes the other variable may also change, and the change may be predictable



Sam's pay ( $p$ ) is based on the number of hours ( $h$ ) he works. If Sam earns \$8.00 per hour, we could use the formula  $p = 8h$  where  $p$  would be the amount Sam is paid, dependent on the number of hour he works.





**Let's plot some points together! Where would I find the point  $(-3, 4)$ ?**