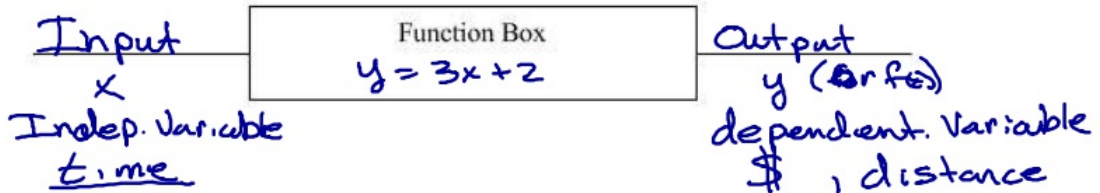


coordinate plane
 graph
 origin (0,0)
 x-axis left to right
 y-axis down to up.
 x-coordinate (x,) first
 y-coordinate (, y) second.
 ordered pair (x,y), point, coordinate point
 quadrants
 linear - straight line
 slope: m, $\frac{\text{rise}}{\text{run}}$, $\frac{\Delta y}{\Delta x}$, rate of change
 positive going up
 negative going down.
 x-intercept (x, 0) crosses x-axis.
 y-intercept (0, y) crosses y-axis.

What is a Relationship?



Independent and Dependent Variables

Independent Variable: input, uncontrolled. (time)

Dependent Variable: output, \$, distance.

Continuous and Discrete Functions

Continuous Function: straight line (graph), breakdown to smaller parts

Discrete Function: dot (graph)

Ex. 1 Chloe is babysitting. She gets paid \$7 per hour. Create a table to show how much money she will earn babysitting.

Independent: hours worked
 Dependent: \$ how much money she makes

Discrete or Continuous

Ex. 2 A tree grows 2 feet every year. Create a table to show how tall the tree will be as it continues to age.

Independent: number of years.
 Dependent: height of the tree

Discrete or Continuous

Ex. 3 Generally, the average price of going to the movies has steadily increased over time.

Independent: time
 Dependent: money you spend.

Discrete or Continuous

Ex. 4 The air pressure inside a tire increases as the temperature increases.

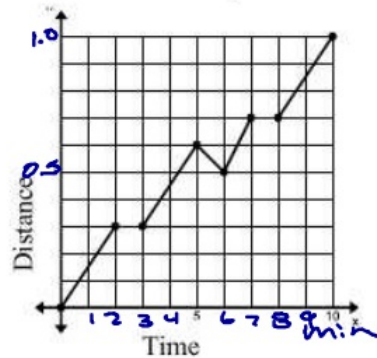
Independent: Temp.
 Dependent: pressure.

Discrete or Continuous

Graphs as a Relation:

Describe what is happening in the graph?

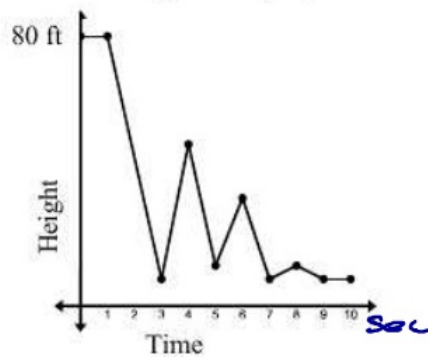
Mr Wallace's ability to run a mile!



Independent Variable: min
 Dependent Variable: Distance (miles)
 y-intercept: (0,0)

What's Happening?

Bungee Jumping



Independent Variable: sec
 Dependent Variable: height.
 y-intercept: (0,80)

What's Happening?
