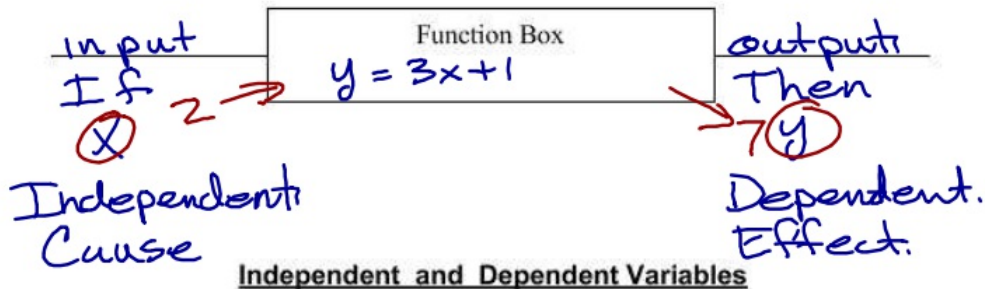


coordinate plane - Graph of points
 graph - picture or visual representation.
 origin Center, (0,0)
 x-axis - side to side / horizontal when $y=0$
 y-axis - up or down / vertical when $x=0$
 x-coordinate first part of (x, y)
 y-coordinate 2nd part of (x, y)
 ordered pair, coordinate point (x, y)
 quadrants 4 - sections of the graph
 linear - straight line
 slope - m , $\frac{\text{rise}}{\text{run}}$, $\frac{\Delta y}{\Delta x}$, rate of change
 positive - above the x-axis
 negative - below the x-axis.
 x-intercept goes thru or touches x-axis.
 y-intercept goes thru or touches y-axis.
 b , starting point.

What is a Relationship?



Independent and Dependent Variables

Independent Variable: Input, x , something no control Ex: time

Dependent Variable: Output, y , what happened Ex: distance, money

Continuous and Discrete Functions

Continuous Function: no break, line; $-1 \leq x \leq \infty$

Discrete Function: individual points: $\{-1, 0, 1, 2, \dots\}$



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

Independent: # of hours _____
 Dependent: how much money _____

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: time/years
 Dependent: how tall

Discrete or Continuous

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

Independent: time
 Dependent: \$ of a movie ticket.

Discrete or Continuous

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

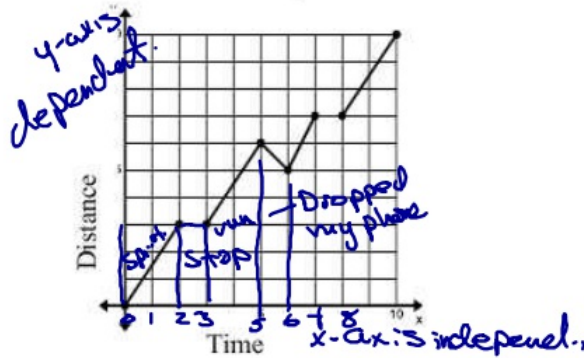
Independent: temp.
 Dependent: air pressure.

Discrete or Continuous

Graphs as a Relation:

Describe what is happening in the graph?

Mr Wallace's ability to run a mile!



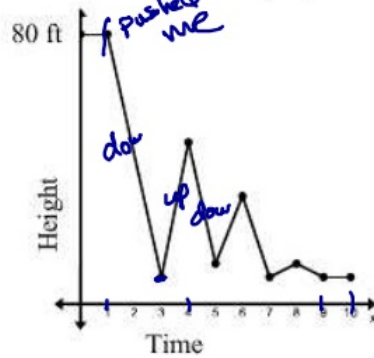
Independent Variable: time

Dependent Variable: distance

y-intercept: (0,0)

What's Happening?

Bungee Jumping



Independent Variable: time

Dependent Variable: height of ground

y-intercept: (0,80)

What's Happening?
