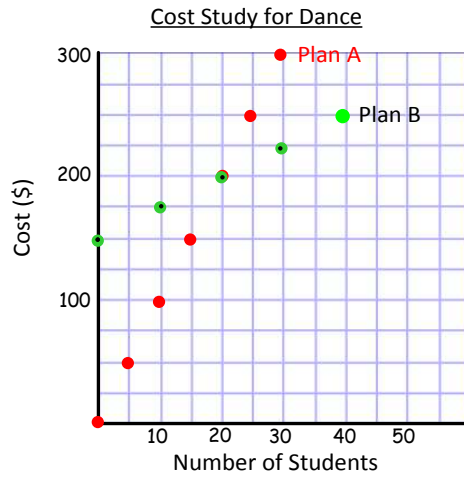


### 4.3 Other Rates of Change/Slope

Ex. 1

Student council is planning a spring dance and has come up with two plans to look at the cost of running the dance.



Is the data discrete or continuous?

Discrete data.  
You can not have part of a student!  
Dashed line.



Is there a correlation?

Yes. Both plans show positive correlation.

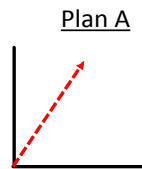


a) Which plan has the greater rate of change?

b) Find the rate of change for each plan.

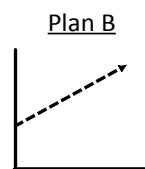
c) Which plan is better?

\*\*Note: Plan B has an initial fee (fixed cost) of \$150, even if no one shows up!



**Direct variation**  
(no fixed cost)

steeper line = greater rate of change

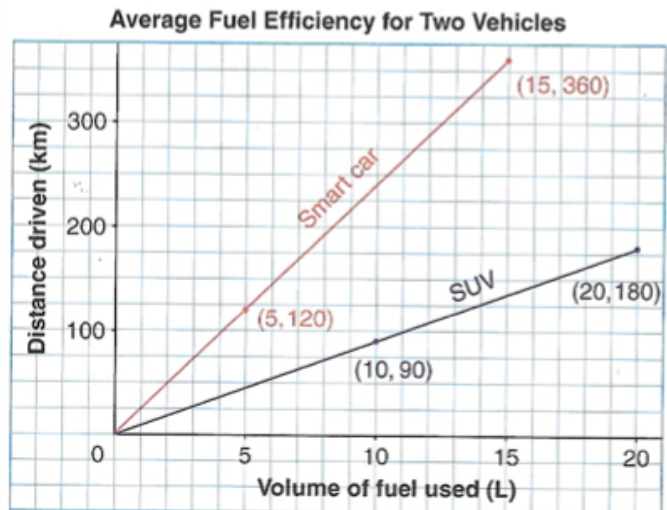


**Partial Variation**  
(has a fixed cost)

d) What would each plan cost for 300 people to attend ?

Ex. 2 page 202 in text "Connect the Ideas "

The graph shows the average fuel efficiency for an older SUV and a new Smart car.



a) Calculate the rate of change for each vehicle.

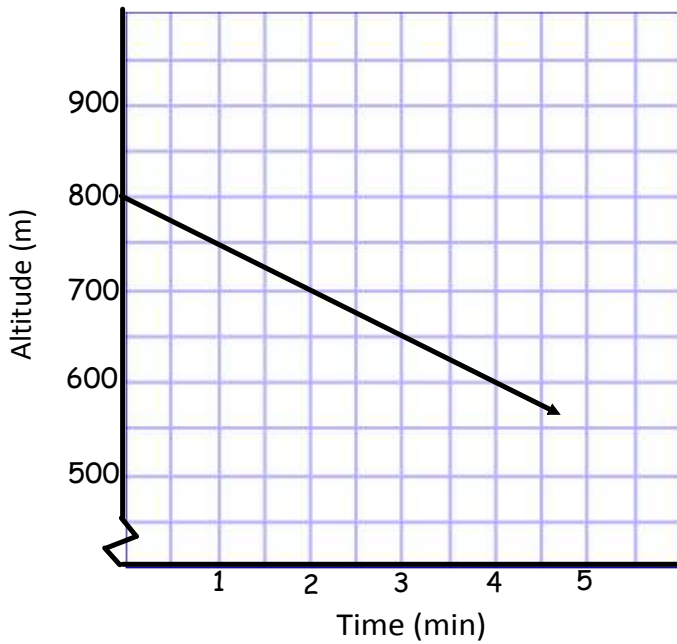


To find the rate of change, pick two good points and count the rise and run.

b) Which car is more efficient? Explain your choice.

Ex.3

Hike down a Mountain



a) What is the initial height ?

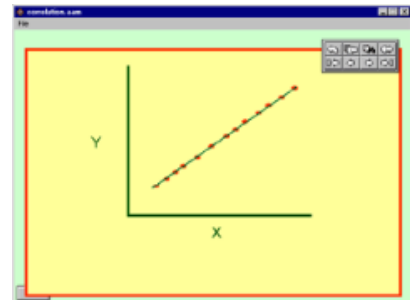
b) What is the rate of change?

c) What does the rate of change tell you ?

**Did you notice??**



Positive correlation: rises to the right, slope/roc is positive or increasing.



Negative correlation: falls to the right, slope/roc is negative or decreasing.



**IN CLASS PRACTICE...**

Finish for Homework  
page 203 #1, 2, 4, 7, 8