

## 3.1 scatterplots

cheez-it	cheez-it
snickers	snickers
black licorice	black licorice
almond joy	almond joy
smarties	smarties
rice krispies treats	rice krispies treats
skittles	skittles
m&m's	m&m's
butterfinger	butterfinger
reese's pieces	reese's pieces
3 musketeers	3 musketeers
nerds	nerds
blowpops	blowpops
altoids	altoids
shortbread cookies	shortbread cookies
oreo cookies	oreo cookies
goldfish	goldfish
gummy bears	gummy bears
funyuns	funyuns
cashews	cashews
raisins	raisins
beef jerky	beef jerky
popcorn	popcorn
wasabi coated peas	wasabi coated peas
smoked almonds	smoked almonds

What would a graph look like for 2 people who have similar interests?

Opposite interests?

No particular correlation?

## **Response (dependent) variable**

- outcome of a study
- usually y, vertical

## **Explanatory (independent) variable**

- attempts to explain observed outcomes
- usually x, horizontal

## **Scatterplot**

- show relationship between 2 quantitative variables
- one variable on horizontal axis, other variable on vertical axis
- a point per individual

At this point, exercises 1, 3, & 5 on page 123 and number 7 on pages 125-126 would be accessible.

Look for

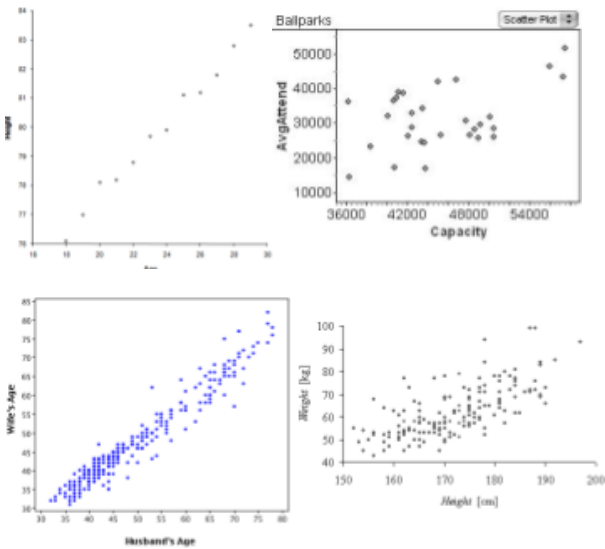
- **overall pattern**
- **any deviations** (like clusters or outliers)

Describe

- **form**
- **direction**
- **strength**

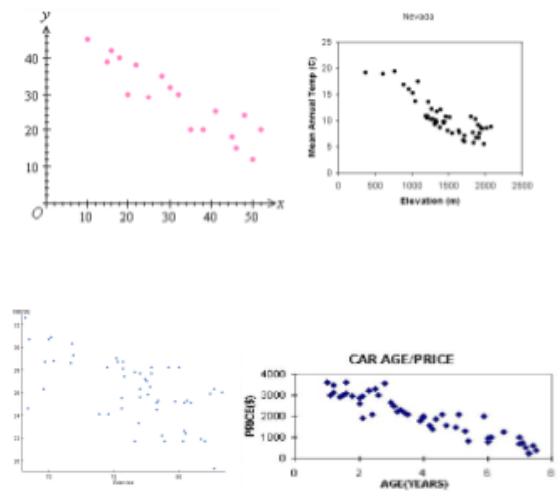
**outlier:** a value outside the overall pattern

## Positive association



when values of 1 variable go up,  
values of the other do too

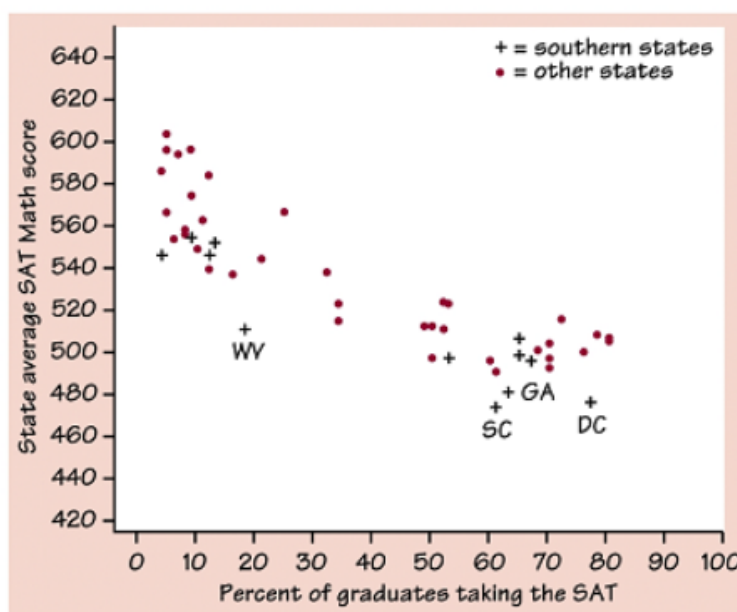
## Negative association



when values of 1 variable go up,  
values of the other go down

You can include categorical variables using different symbols or colors.

TI-83: separate data into two lists, use different symbol for each, plot both at the same time.



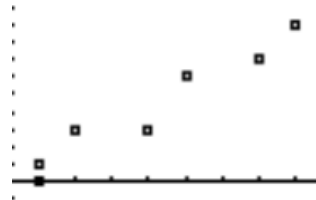
### 3.1 Couples\_FULLL.ftm



L1	L2	L3	3
1	0		
1	1		
2	1		
3	1		
4	1		
5	1		
6	1		
7	1		
8	1		

L3(1)=

Plot1 Plot2 Plot3  
On Off  
Type:   
Xlist: L1  
Ylist: L2  
Mark: + .





You can now try  
exercises 9 & 11 on page 129  
and exercise 13 on page 134.

## Attachments

---



3.1 Couples\_FULLL.ftm