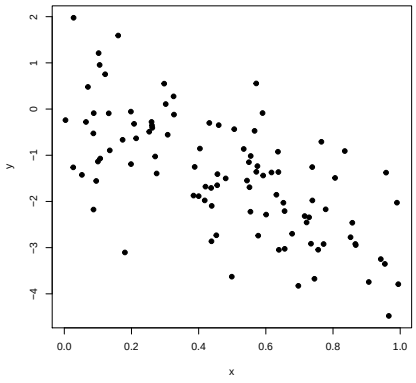
1. For each of the pairs of variables below, circle the response variable.

pair	variable 1	variable 2
1	age	height
2	home selling price	number of bathrooms
3	cereal box capacity	cereal box cost
4	growing degree days	corn maturity date
5	amount of sales	amount of advertising
6	interest rate	amount of home sales
7	amount of home sales	home sale price
8	salary	years of experience
9	age	salary

Answer:
Response variables are 1. height, 2. home selling price, 3. cereal box cost, 4. corn maturity date, 5. amount of sales, 6. amount of home sales, 7. unclear, 8. salary, 9. salary.

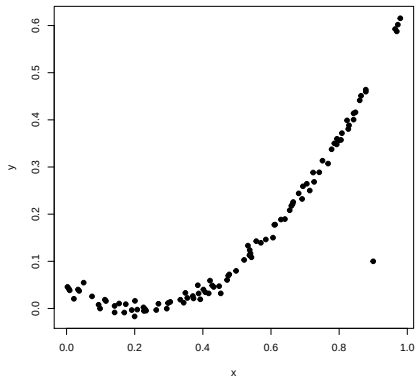
2. For each of the plots below, determine the form, direction, and strength. Also, circle any outliers. Finally, guess the sample correlation.

   (a) Dataset 1



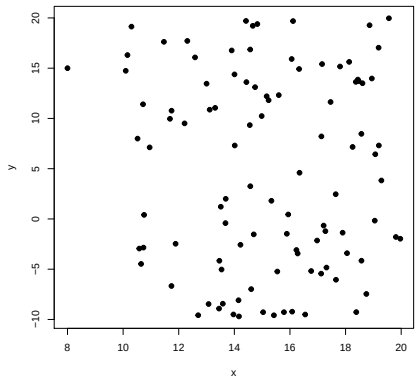
Answer:
linear, negative, moderate, no outliers, correlation of -0.66

(b) Dataset 2



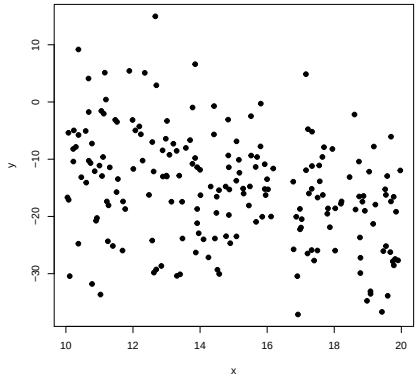
Answer:
curved, (generally) positive, outlier on bottom right, correlation of 0.89 although this correlation is pretty irrelevant since the relationship is not linear

(c) Dataset 3



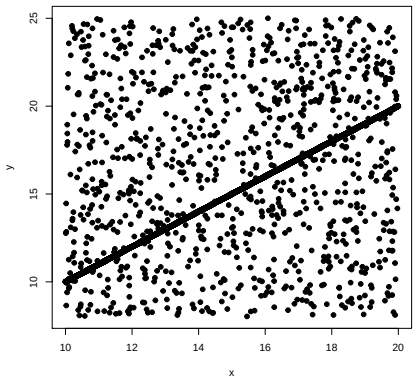
Answer:
scattered, no direction, weak, outlier on left, correlation of -0.04

(d) Dataset 4



Answer:
linear, negative, weak, no outliers, correlation of -0.34

(e) Dataset 5



Answer:

This is tricky and demonstrates a problem with scatterplots. There is really no way to tell how many observations are in the solid line. It actually looks like there are two populations of observations: 1) points that are scattered and 2) points that fall along the line. Probably we would want to analyze these points separately.