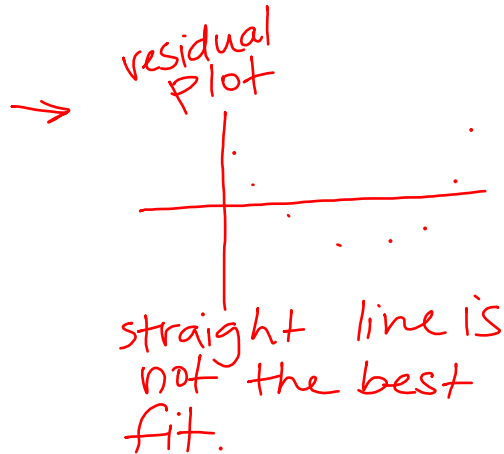
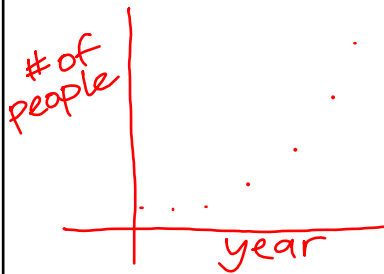
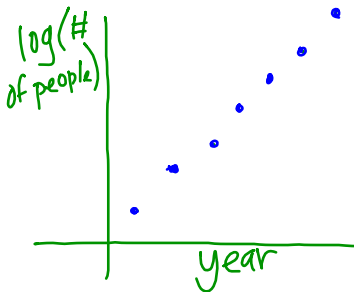


12.2 Transforming To Achieve Linearity

If we see some curved pattern in the scatterplot, we can transform it to make it linear



↓ transformed



★ If there is not a linear relationship between x and y , maybe there is a linear relationship between $\log x$ & y

x and \sqrt{y}

x^3 and y

$\ln x$ and $\ln y$

$\frac{1}{x}$ and y

$$\log(y) = a + bx$$

interpret slope:

For each additional x (year) we would predict an increase of b in $\log(y)$

See p. 768-770, 778 for examples.