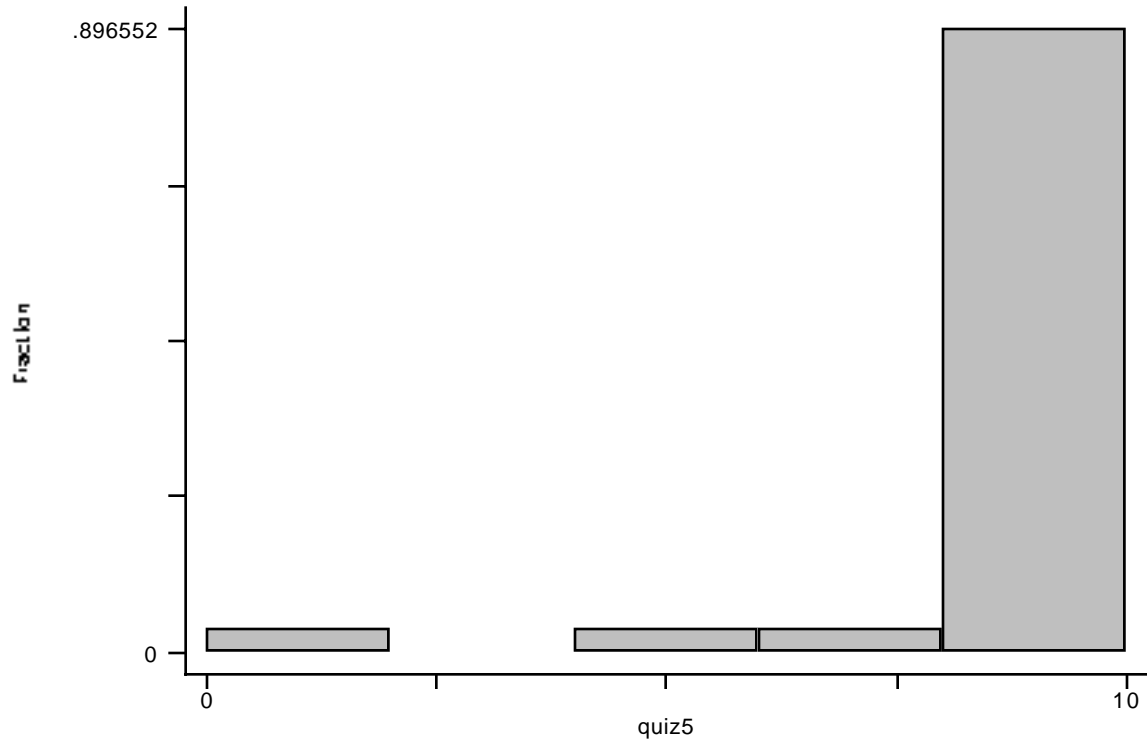# Quiz 4

Scores:
Avg: 9.0, SD 2.2, Median 10

These data are taken from a study of 136 boys and girls born between 1928 and 1929 in Berkeley, CA. One of the goals of the study is to understand physical development. The data below show the height of the children at age 2, and their weight at age 9. Can we predict children's weight at age 9 given just their height at two-years old?

Here are some summary statistics:
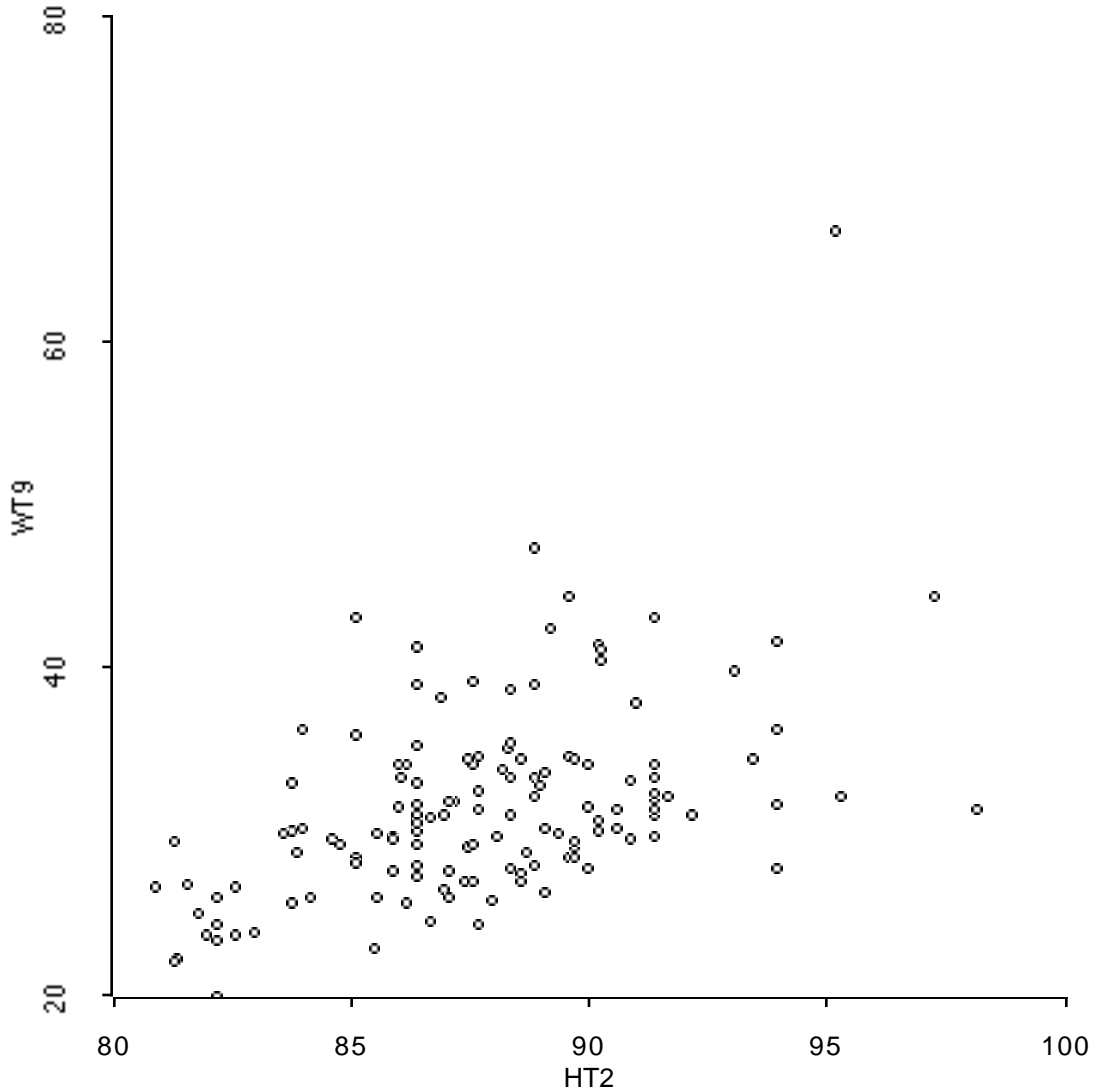


Average height at Age 2:  87.8 cm, SD = 3.4 cm
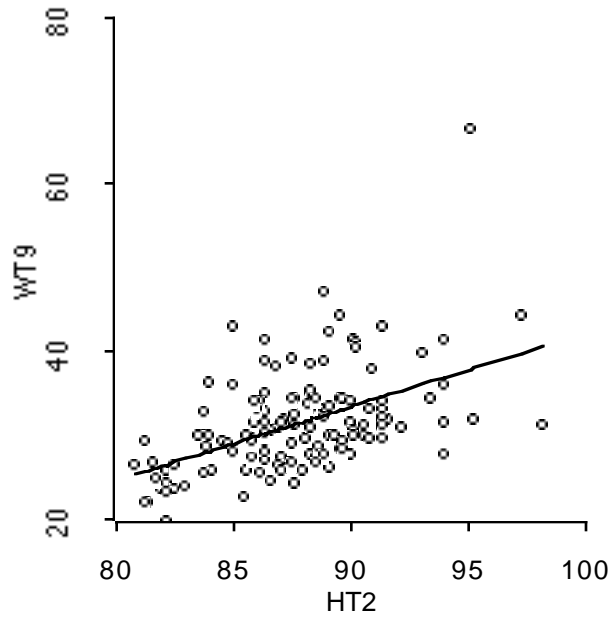Average weight ate age 9: 31.6kg, SD = 6.0 kg
r = 0.50

a) Find the equation for the regression line
slope = r*(SD of weight)/(SD of height) = (.5 * 6)/(3.4) = 0.8823 kg/cm
intercept = avg weight - slope*avg height = 9.31 - .8823*87.8 = -68.15

yhat = -68.15 + .8823 x

where y is weight at age 9 and x is height at age 2.

b) Graph the regression line on the plot above.  Mark the point (xbar, ybar).



The point (xbar, ybar) = (87.8, 31.6) should be right in the center of mass of this cloud of points.  (I can't mark it on the computer.)