Name _____ KEY _____

1. Consider the data below.

Height (in)	70.8	66.2	71.7	68.7	67.6	69.2	66.5	67.2	68.3	65.6
Femur Length (in)	42.5	40.2	44.4	42.8	40	47.3	43.4	40.1	42.1	36

a. Draw a scatterplot of the data.
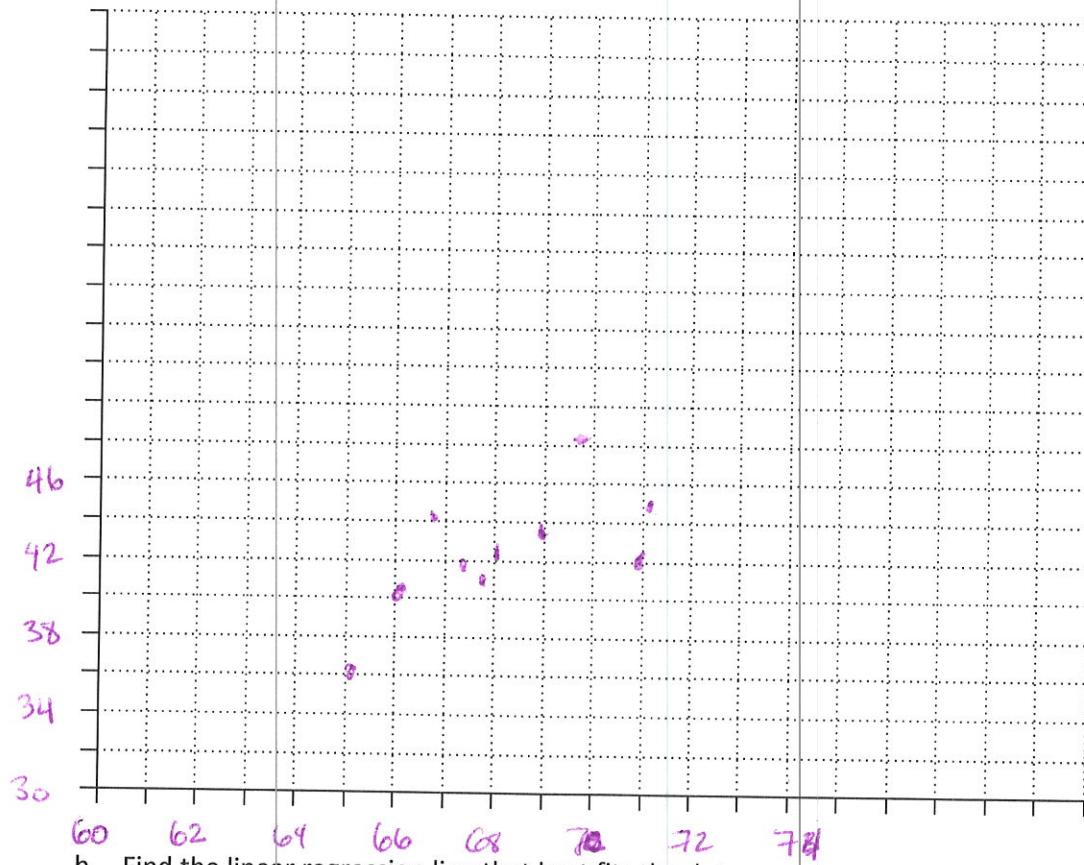
b. Find the linear regression line that best fits the data.

$$y = 1.00 X - 26.36$$

c. What is the correlation coefficient?

$$r = .651$$

d. What proportion of the change in femur length is explained by the height of a person?

about 42%

e. Interpret the slope in the context of the problem.

for each inch taller you are, you can expect your femur to also grow by about an inch .

2. Circle any of the graphs below that are likely to have a near zero correlation value.

a.

Sales vs Temperature °C

b.

Paycheck vs Week

c.

d.

body vs mind