Lesson #9 Assignment

(1)

(a) What are the independent variables.

E

(b) Describe trend in the relationship.

Species with higher Job planting rates tended to have shorter life expectancies.

(c) Which company will take long to do the job of these companies which one will charge the least.

E and D will take longer to do the Job.

E will charge the least.

(d) Companies to charge the same are

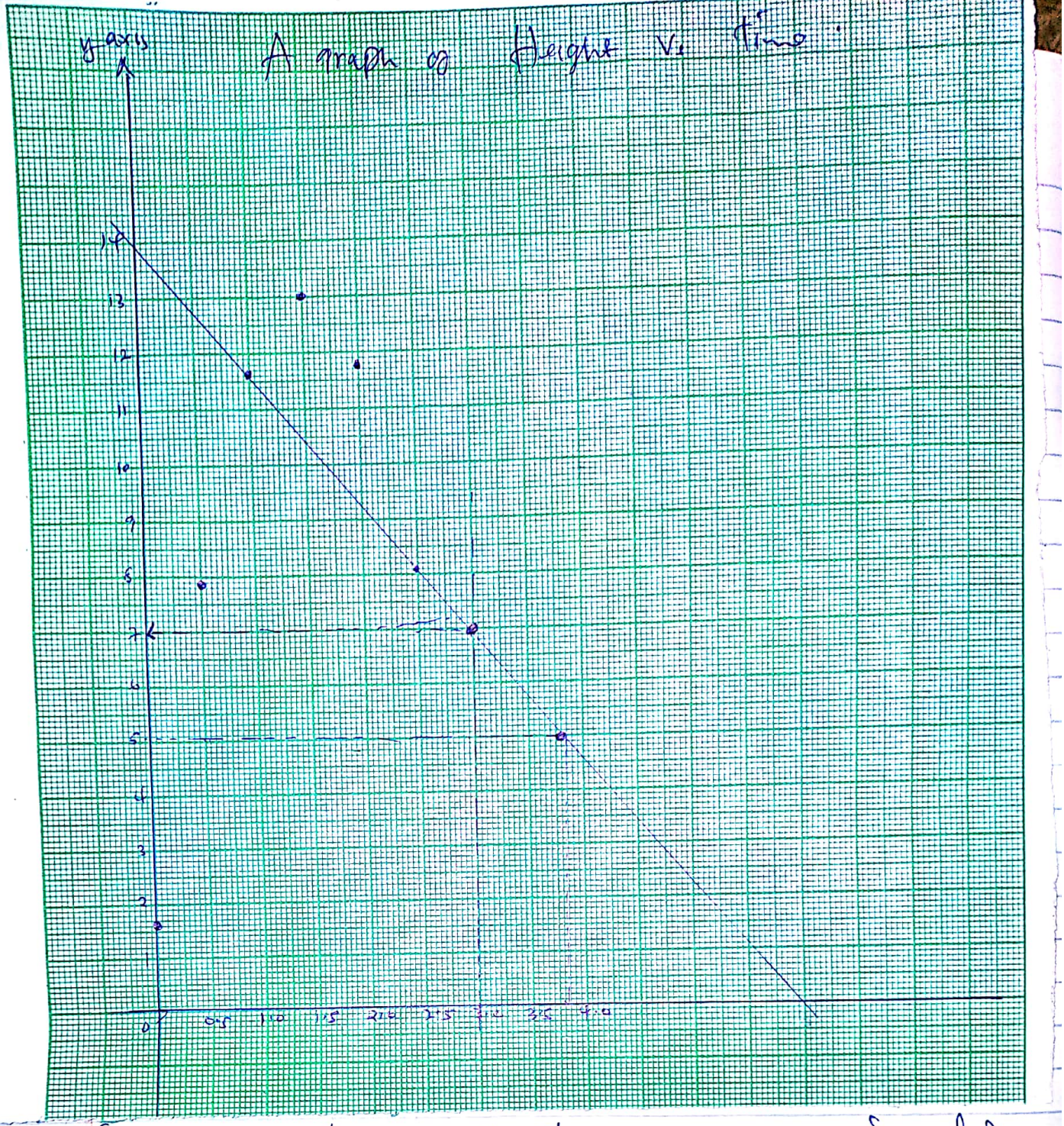
B and D

(e) Why say choose to pick company E.

Company E is independent of other Variables and it ~~take~~ longer time to operate.

(f) Why Sas Choose to pic company A

A gives the highest cost over a short Period of time.



(a) Create the scatter plot for the given data

(b) Draw the line of the best fet.

(c) Describe the correlation of the scatter plot.

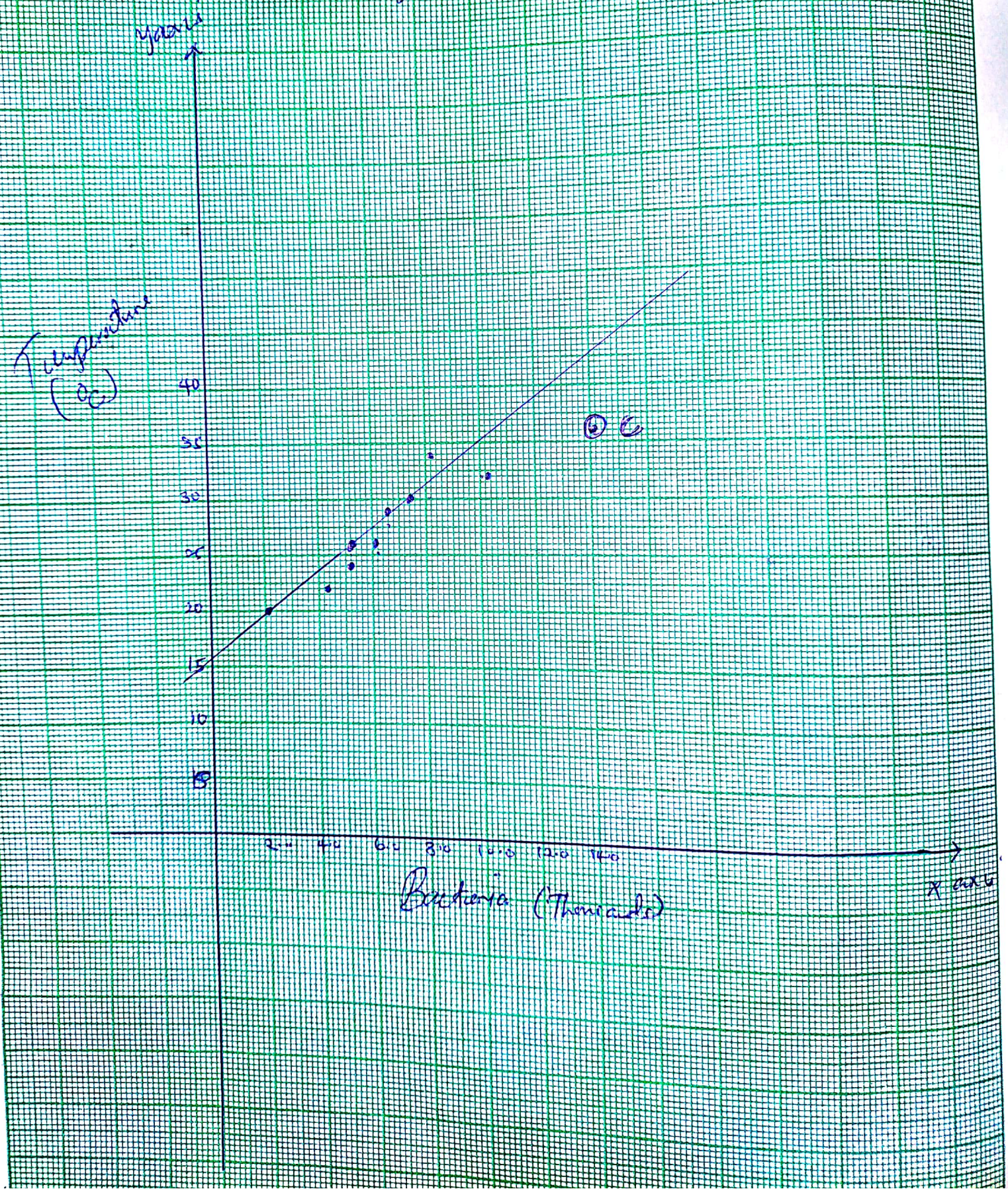
This example describe the curvillinear relationship between the variable Height and time. In this example the height increase throughout the early time and begin decreasing.

(d) Predict the ball height at 3 seconds = 7M.

(e) Predict scatter plot at 5M = 4 seconds.

Create .. the Scatter Plot

A graph of Temperature °C against Bacteria



(3)

(a) ~~outliers~~ Scatter plots

(b) Outliers Point C in the graph is an outliner Because it differs significantly from other observations.

c Add line of the best fit.

d Determine the growth rate of bacteria.

Growth rate $\frac{dN}{dt} = rN$

$\frac{dN}{dt} = r_{max}\left(K - \frac{N}{K}\right)N$

=

f Determine the equation of the line of the best fit.

Pick two points.

(i) (2, 20)

(ii) (6, 27.5)

slope $= \frac{y_2 - y_1}{x_2 - x_1}$

$= \frac{27.5 - 20}{6 - 2}$

$= \frac{7.5}{4}$

$m = 1.875$

$y = mx + c$

$y = 1.875x + c$

$c = 20 - 1.875 \times 2$

$c = 16.25$

$y = 1.875x + 16.25$

(g) Use the equation to predict the bacteria count at temp of 25°C

$y = 1.875x + 16.25$

$25^\circ C = 1.875x + 16.25$

$25 - 16.25 = 1.875x$

$\frac{8.75}{1.875} = \frac{1.875x}{1.875}$

$x = 4.667$

$= 4.667$ Bacteria

(h) At what temp is bacteria count expected to reach 1000

$y = mx + c$

$y = 1.875x + 16.25$

$y = 1.875 \times 18 + 16.25$

$y = 33.75 + 16.25$

$y = 50$

Temp $= 50^\circ C$