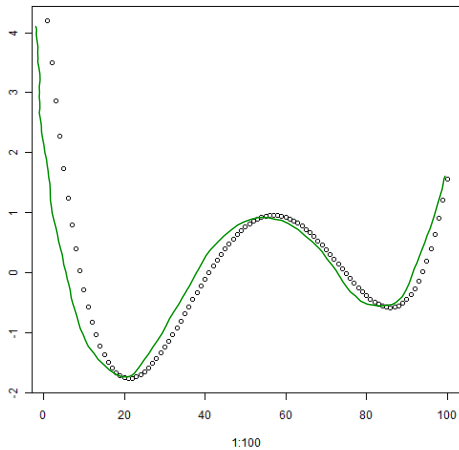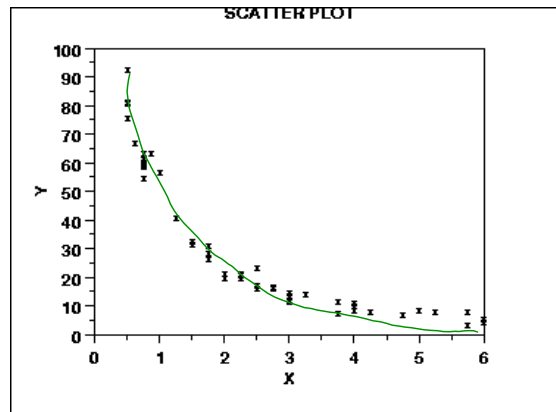# 3.3 Curve of Best Fit

- Does it seem reasonable to draw a LoBF for the relation shown?

- Do the points seem related?

- Sometimes <u>points</u> on a scatter plot are related but <u>do not lie on a straight line</u>. When this happens, the data can be approximated by a curve called the <mark>curve of best fit</mark>.

To draw a curve of best fit, draw a smooth curve that passes through as many points as possible.

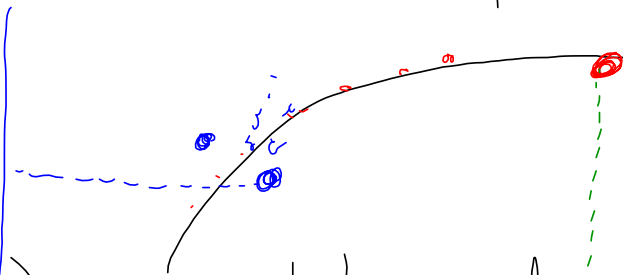<u>Ex. 1</u> Draw a curve of best fit for the following scatter plot.

Note

- If the pattern appears to follow a <mark>straight line</mark>, the relation is ____linear____, and to make predictions, draw a ____line of best fit____.

- If the pattern appears to follow <mark>a curve</mark>, the relation is ____non-linear____, and to make predictions, draw a ____curve of best fit____.

None
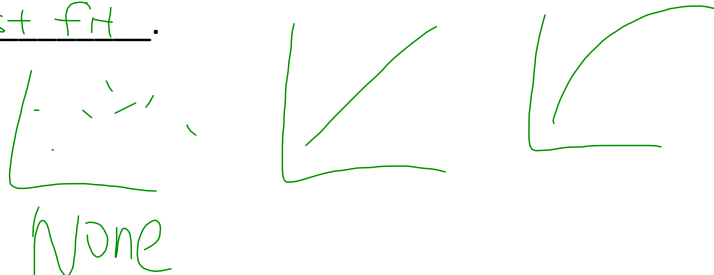
Ex 3

a) Speed and number of seats on a plane

b) upward trend $\longrightarrow$ points on graph go up

c) Is this relation linear or non-linear?
Should you draw a line or curve of best fit? Explain your choice.

non-linear $\therefore$ curve

d) Break shows data does not start at zero

e) 420
   410

f) 580
   591

d) How many particles are emitted after 900 seconds? To answer this question we need to use _____.
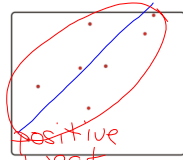
Draw a line of best fit for each of the scatter plots that show a
linear relationship below. Write two or three key words to
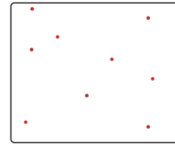describe each relation on the line below the scatter plot.
(positive correlation   strong,   linear
OR negative correlation   OR weak,   OR non-linear
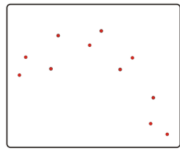OR *no correlation,*
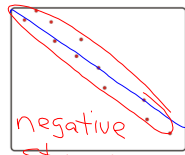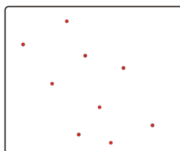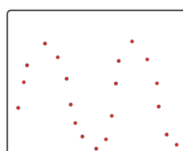
a) negative strong linear
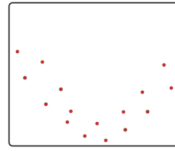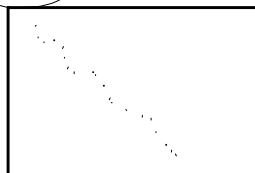
b) positive weak linear

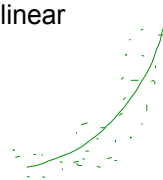c) _____

d) _____

e) _____

f) _____

g) _____

h) _____
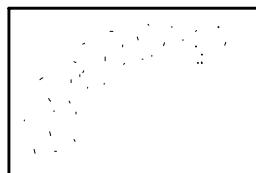
i) _____
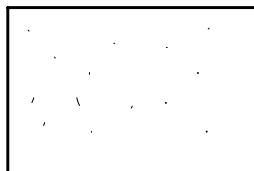
Draw a Scatter Plot that matches the description given:

Strong) falls to the right, linear

Weak, rises upward, non-linear

No Relationship
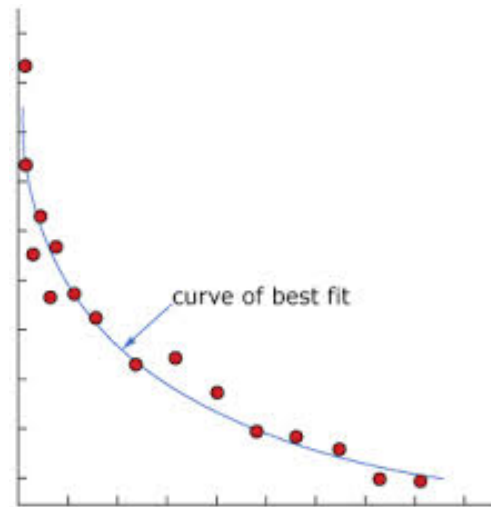
Homework
pg. 161 #1, 4 (CoBF)
~~pg. 168 #2 (LoBF)~~

curve of best fit

Attachments

scan0002.pdf