How can I create a scatterplot with a regression line or other types of lines in R?

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Creating a scatterplot with a regression line or other types of lines in R can be done by using the "plot" function and specifying the type of line desired in the "type" argument. This will generate a scatterplot with the specified line overlaid on the plot. Additionally, the "abline" function can be used to add a regression line to the plot, with options to customize the line's slope and intercept. This allows for easy visualization and analysis of the relationship between two variables in a dataset.

How can I do a scatterplot with regression line or any other lines? | R FAQ

R makes it very easy to create a scatterplot and regression line using an lm
object created by lm function. We will illustrate this using the hsb2
data file.

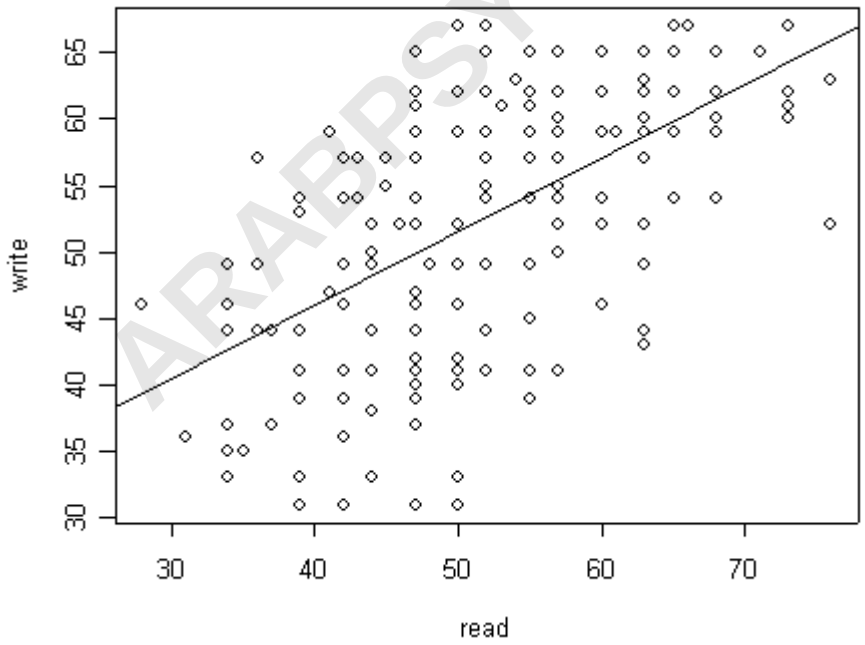
```
hsb2<-
read.table("https://stats.idre.ucla.edu/stat/data/hsb2.csv", sep=",", header=T)
head(hsb2)
```

```
id female race ses schtyp prog read write math science socst
1 70 male white low public general 57 52 41 47 57
2 121 female white middle public vocation 68 59 53 63 61
3 86 male white high public general 44 33 54 58 31
```

4 141 male white high public vocation 63 44 47 53 56
5 172 male white middle public academic 47 52 57 53 61
6 113 male white middle public academic 44 52 51 63 61

Here we can make a scatterplot of the variables write with read.

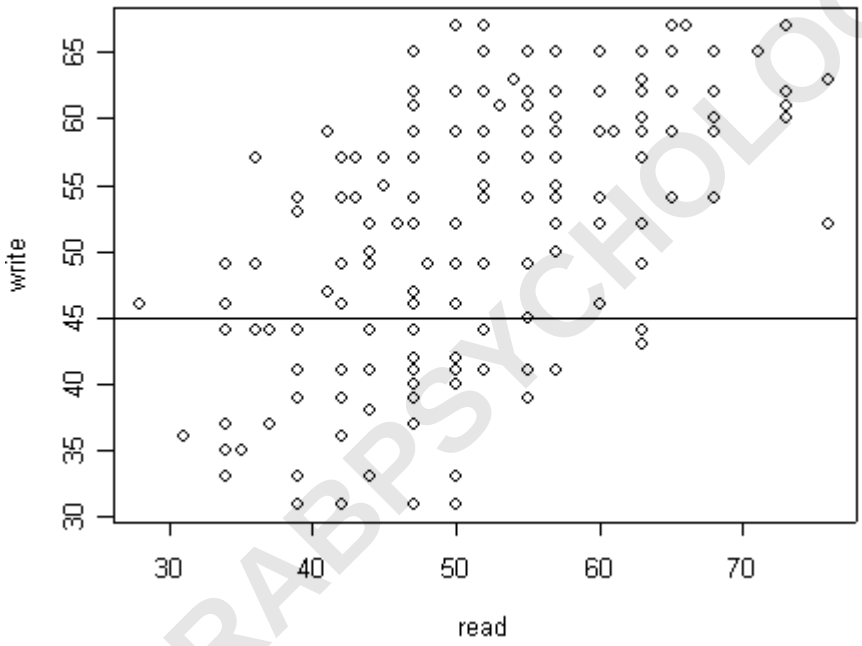
```
reg1 <- lm(write~read,data=hsb2)
summary(reg1)

with(hsb2,plot(read, write))
abline(reg1)
```



The abline function is actually very powerful. We can

add any
arbitrary lines using this function. For example, we can add a horizontal
line at write = 45 as follows.

```
with(hsb2, plot(read, write))
abline(h=45)
```



Here is another example where we add a line of 45 degree angle passing
through the origin. In this type of syntax, the first parameter is the
intercept and the second one the slope.

```
with(hsb2,plot(read, write))
abline(0, 1)
```