Homework 0

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Problem 1. How to reference R values within LaTeX using $\backslash Sexpr\{\}$.

Solution 1. Here is some R code...

```
x <- c(1, 2, 3, 4, 5)
y <- c(1, 2, 1.5, 3.5, 2.5)
x.mean <- mean(x); x.sd <- sd(x)
y.mean <- mean(y); y.sd <- sd(y)
```

The mean for x is 3 and the standard deviation is 1.58. The mean for y is 2.1 and the standard deviation is 0.96.

Problem 2. How to add regression tables to LaTeX with *xtable*().

Solution 2. Run the regression using the data above...

```
reg <- lm(y ~ x)
```

Table 1: This is a caption

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	0.7500	0.7837	0.96	0.4092
x	0.4500	0.2363	1.90	0.1530

Problem 3. How to add pdf plots to LaTeX using knitr.

Solution 3. Figure 1 shows the regression line.

```r
data <- data.frame(cbind(y, x))
library(ggplot2)
ggplot(data = data, aes(x = x, y = y)) +
    geom_point(shape = 1) +
    geom_smooth(method = lm) +
    ggtitle("This is a title")
```

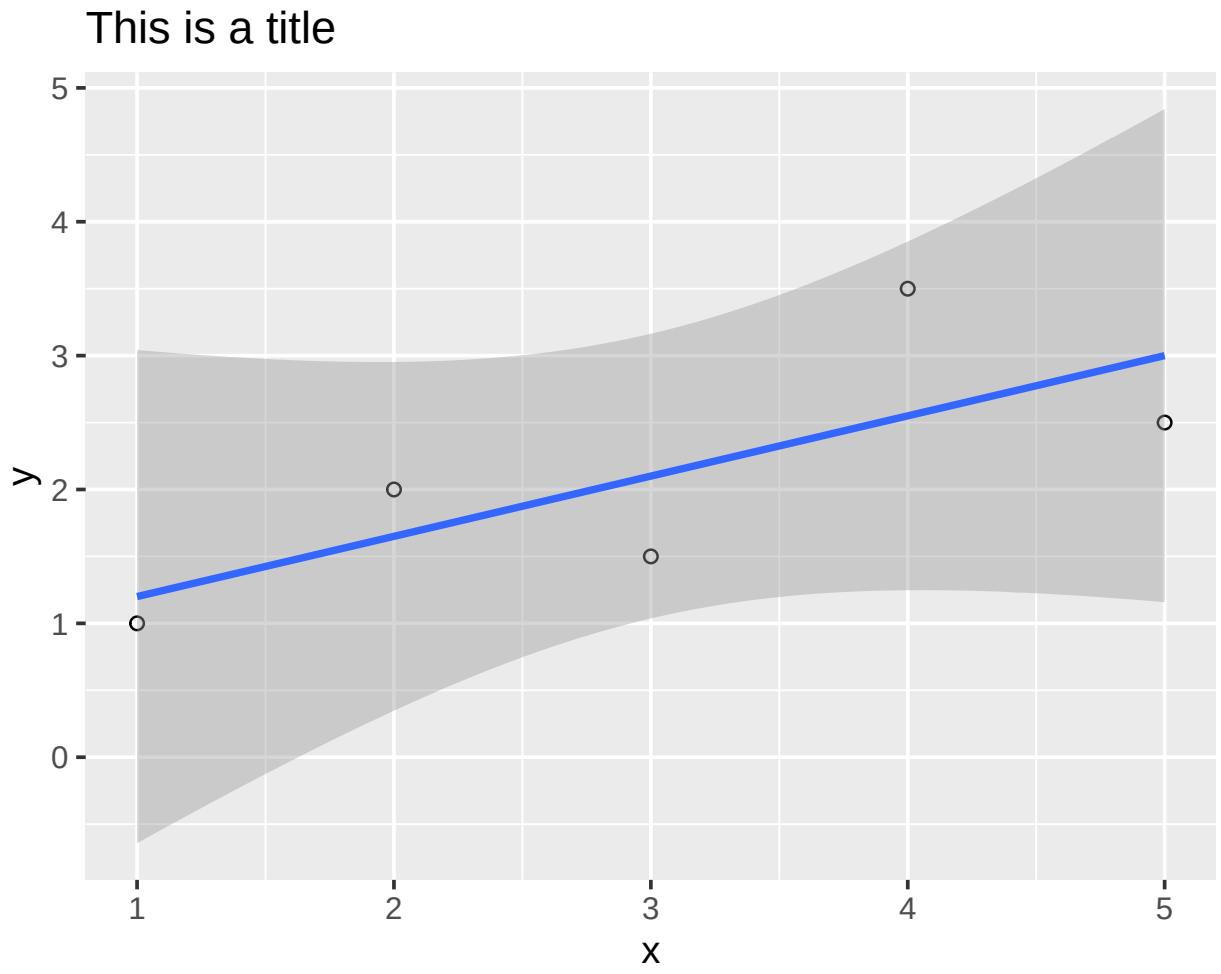

Figure 1: Regression line