```
#=====================================================================
#graph for hw 2 - number 1
#
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# 1/28/2018
#=====================================================================
```

Loading required libraries

```
library(tidyverse)
library(broom)
```

Creating dataset from problem

```
ffa_data <- tribble(
  ~t,    ~c_ffa,
  0,     4e-5,
  10,    2.43e-5,
  20,    1.48e-5,
  30,    8.98e-6,
  40,    5.46e-6,
  50,    3.32e-6,
  60,    2.02e-6
) %>%
  # adding ln(C_ffa) column
  # log() function in R defaults to ln
  mutate(ln_c_ffa = log(c_ffa))
```
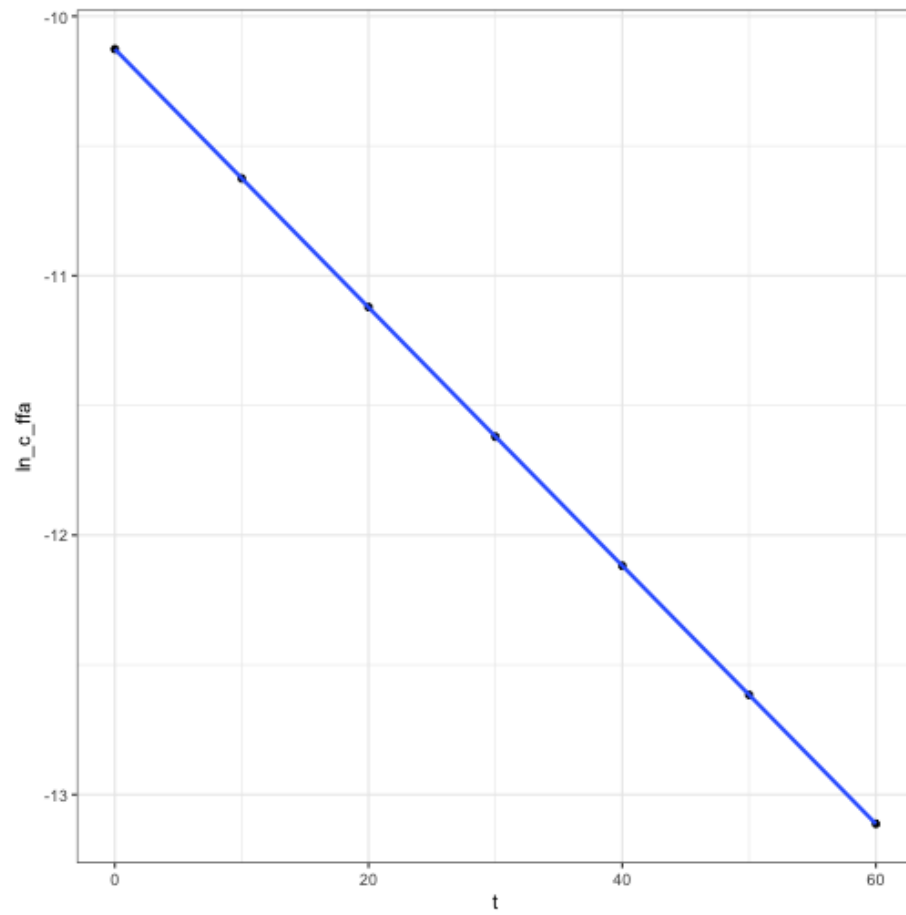
Plotting the log concentration of FFA vs time

```
ggplot(ffa_data, aes(t, ln_c_ffa)) +
  geom_point() +
  geom_smooth(method = "lm") +
  theme_bw()
```

Running linear model to get slope and intercept values.

```
ffa_model <- ffa_data %>%
  nest() %>%
  mutate(lm_model = map(data, ~lm(ln_c_ffa ~ t, data = .x)),
         lm_tidy = map(lm_model, tidy))

# Printing linear model coeffecients.
ffa_model %>% unnest(lm_tidy, .drop = TRUE) %>% knitr::kable()
```

term	estimate	std.error	statistic	p.value
(Intercept)	-10.1267742	0.0005306	-19087.002	0
t	-0.0497698	0.0000147	-3382.239	0

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