

## Chickwts

1.) Find the mean weight and the median weight of all of the chicks.

```
data("chickwts")

mean_weight <- mean(chickwts$weight)
median_weight <- median(chickwts$weight)

data("chickwts")

mean_weight <- mean(chickwts$weight)
median_weight <- median(chickwts$weight)

print(paste("Mean weight of the chicks:", mean_weight))

## [1] "Mean weight of the chicks: 261.30985915493"

print(paste("Median weight of the chicks:", median_weight))

## [1] "Median weight of the chicks: 258"
```

2.) Which feed was the heaviest chick given?

```
data(chickwts)

max_weight <- max(chickwts$weight)
heaviest_feed <- chickwts$feed[chickwts$weight == max_weight]

print(paste("Heaviest chick weight =", max_weight, "grams & was given", heaviest_feed, "feed."))

## [1] "Heaviest chick weight = 423 grams & was given sunflower feed."
```

3.) Which feed was the lightest chick given?

```
data(chickwts)

min_weight <- min(chickwts$weight)
lightest_feed <- chickwts$feed[chickwts$weight == min_weight]

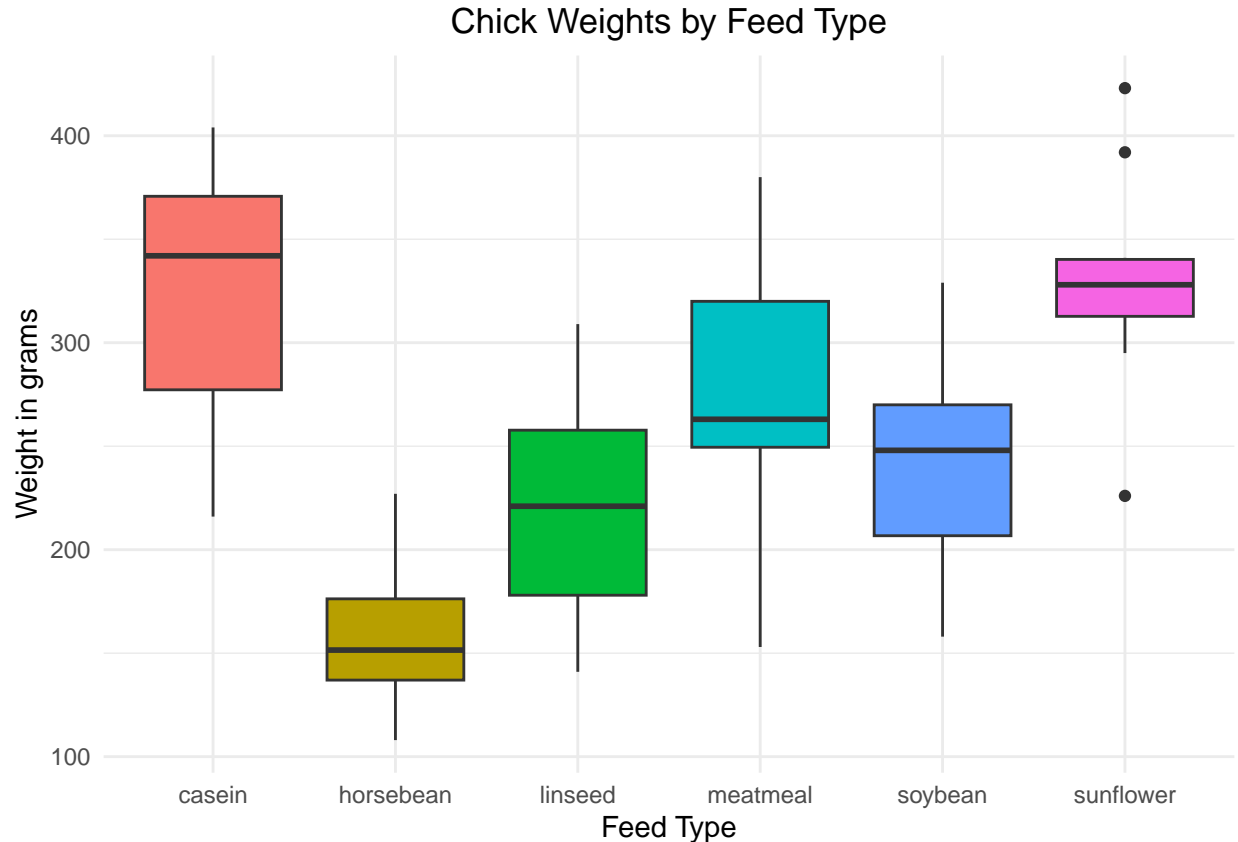
print(paste("Lightest chick weight =", min_weight, "grams & was given", lightest_feed, "feed."))
```

```
## [1] "Lightest chick weight = 108 grams & was given horsebean feed."
```

4.) Create a diagram that shows box plots side-by-side to compare the chick weights by feed type.

```
library(ggplot2)
data(chickwts)

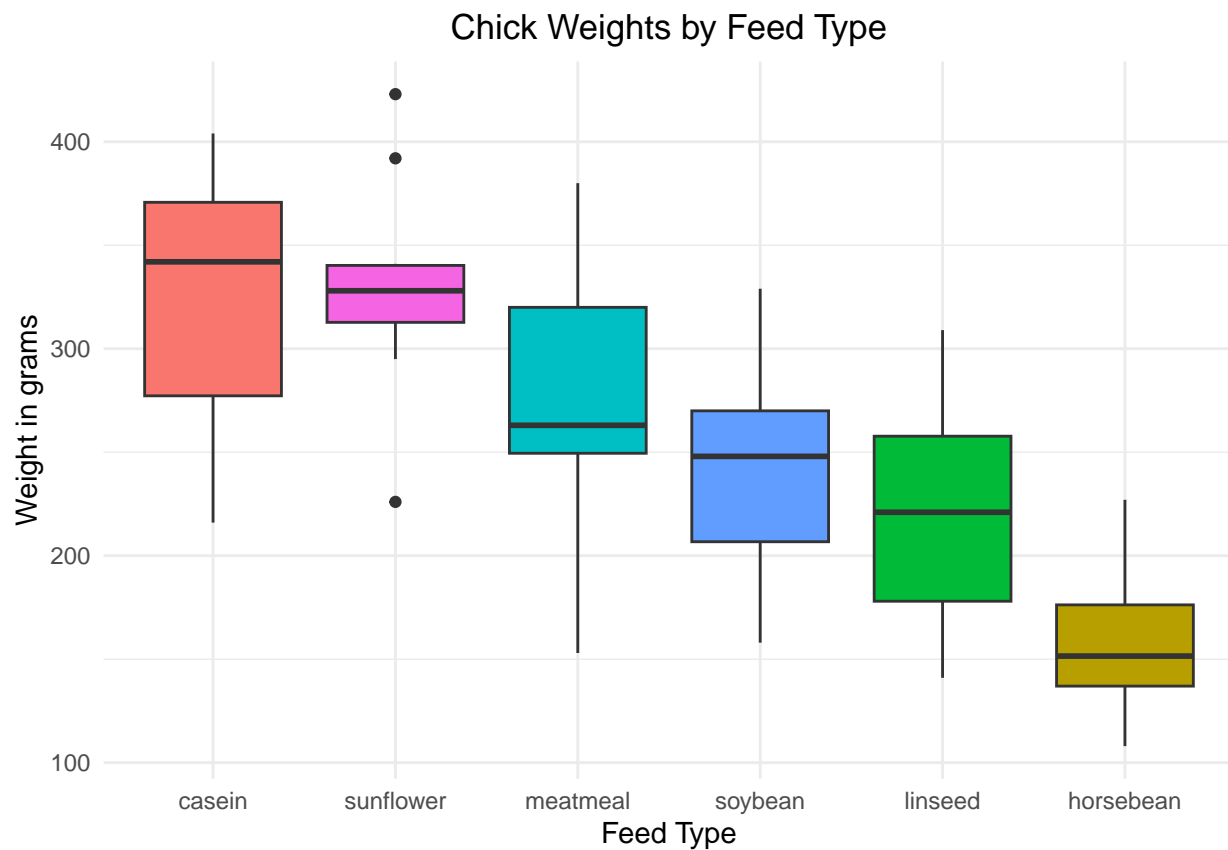
ggplot(chickwts, aes(x = feed, y = weight, fill = feed)) +
  geom_boxplot() +
  labs(title = "Chick Weights by Feed Type", x = "Feed Type", y = "Weight in grams") +
  theme_minimal() +
  theme(legend.position = "none",
        plot.title = element_text(hjust = 0.5))
```



5.) According to these box plots, which two feed types resulted in the heaviest chicks.

```
library(ggplot2)
data(chickwts)

ggplot(chickwts, aes(x = reorder(feed, -weight, median), y = weight, fill = feed)) +
  geom_boxplot() +
  labs(title = "Chick Weights by Feed Type", x = "Feed Type", y = "Weight in grams") +
  theme_minimal() +
  theme(
    legend.position = "none",
    plot.title = element_text(hjust = 0.5)
  )
)
```



So the heaviest chicks were fed Casein (and the lightest horsebean).