

# Add Reference Lines to a Plot

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In this article, we will see how to add reference lines to a plot, either horizontal, vertical, or diagonal (specified by slope and intercept) using ggplot2 in R Programming Language.

```
library(ggplot2)
summary(iris)
```

```
# Prepare data and create dotplots
p <- ggplot(iris, aes(Sepal.Length, Sepal.Width)) +
  geom_point(colour = "orange") +
  theme_classic()
p

# Add vertical lines
p +
  geom_vline(xintercept = mean(iris$Sepal.Length)) +
  geom_vline(xintercept = 7,
    size=1.5,
    linetype = "dashed",
    alpha = 0.5)

# Add horizontal lines
p +
  geom_hline(yintercept = 3,
    linetype = 3,
    size = 1)

# Add diagonal lines
p +
  geom_abline(intercept = 3.5,
    slope = -0.2,
    colour = "skyblue",
    size = 2) +
  scale_x_continuous(expand = c(0,0), limits = c(0,9))
```



