

# Test Plots

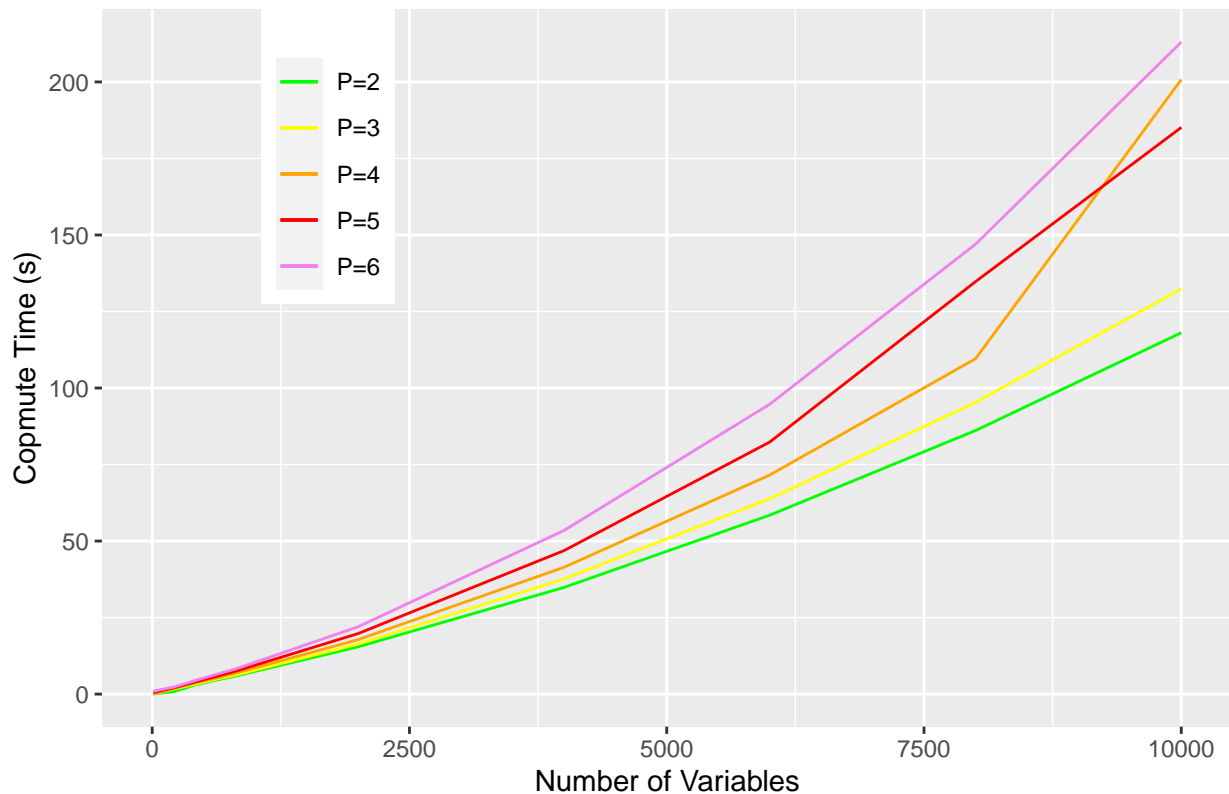
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```
library(ggplot2)
data_A <- read.table(file="A-Optimal.txt",header=T)
data_D <- read.table(file="D-Optimal.txt",header=T)
data_E <- read.table(file="E-Optimal.txt",header=T)

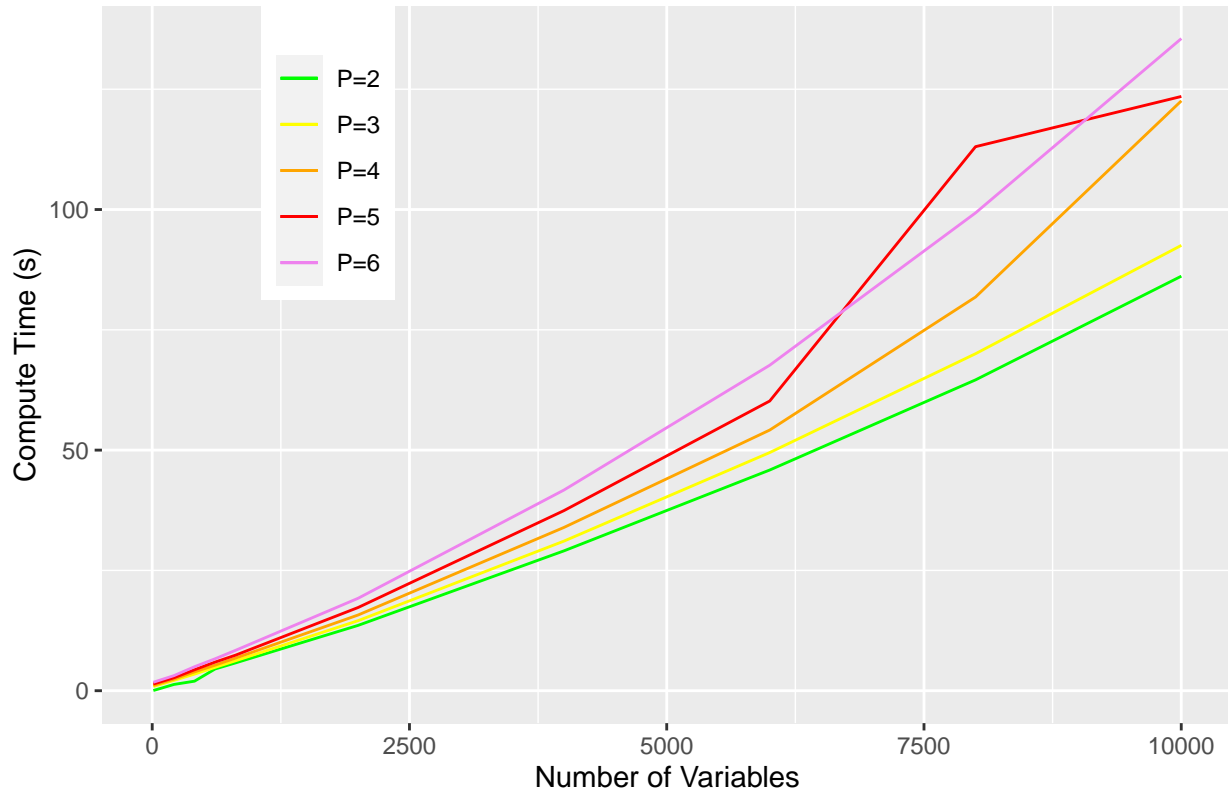
ggplot(data_A,aes(N)) +
  geom_line(aes(y=X2,colour="P=2")) +
  geom_line(aes(y=X3,colour="P=3")) +
  geom_line(aes(y=X4,colour="P=4")) +
  geom_line(aes(y=X5,colour="P=5")) +
  geom_line(aes(y=X6,colour="P=6")) +
  labs(x = "Number of Variables", y = "Copmute Time (s)", title = "A-Optimal (a = -3, b = 3)") +
  theme(legend.position = c(0.2,0.8)) +
  scale_color_manual("", values = c("P=2" = "green", "P=3" = "yellow", "P=4" = "Orange", "P=5" = "red",
```

A-Optimal (a = -3, b = 3)



```
ggplot(data_D, aes(N)) +
  geom_line(aes(y=X2, colour="P=2")) +
  geom_line(aes(y=X3, colour="P=3")) +
  geom_line(aes(y=X4, colour="P=4")) +
  geom_line(aes(y=X5, colour="P=5")) +
  geom_line(aes(y=X6, colour="P=6")) +
  labs(x = "Number of Variables", y = "Compute Time (s)", title = "D-Optimal (a = -3, b = 3)") +
  theme(legend.position = c(0.2, 0.8)) +
  scale_color_manual("", values = c("P=2" = "green", "P=3" = "yellow", "P=4" = "Orange", "P=5" = "red",
```

D-Optimal (a = -3, b = 3)



```
ggplot(data_E, aes(N)) +
  geom_line(aes(y=X2, colour="P=2")) +
  geom_line(aes(y=X3, colour="P=3")) +
  geom_line(aes(y=X4, colour="P=4")) +
  geom_line(aes(y=X5, colour="P=5")) +
  geom_line(aes(y=X6, colour="P=6")) +
  labs(x = "Number of Variables", y = "Compute Time (s)", title = "E-Optimal (a = -3, b = 3)") +
  theme(legend.position = c(0.2, 0.8)) +
  scale_color_manual("", values = c("P=2" = "green", "P=3" = "yellow", "P=4" = "Orange", "P=5" = "red",
```

E-Optimal ( $a = -3$ ,  $b = 3$ )

