Assignment 5 - Dynamic Models

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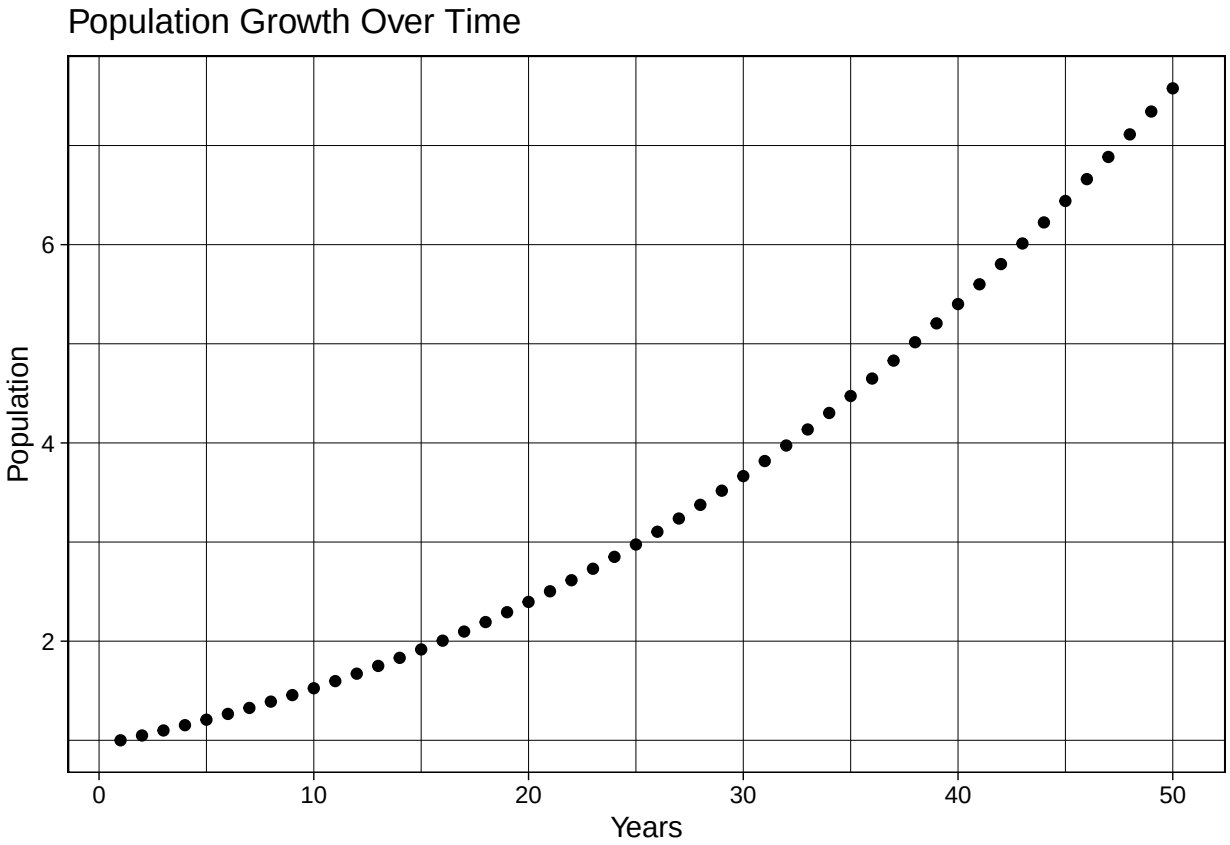
```
source("popK_model.R")

#set parameters
P_inital <- 1
years <- as.numeric(c(1:50))
parms <- list(r = 0.05, K = 20)

#apply solver
ode <- ode(y = P_inital, times = years, func = popK_model, parms = parms)

#create a data frame
colnames(ode) <- c("year","pop")
ode_df <- as.data.frame(ode)

#plot results
ggplot(ode_df, aes(x = year, y = pop)) +
  geom_point() +
  labs(x = "Years",
       y = "Population",
       title = "Population Growth Over Time") +
  theme_linedraw()
```


Population Growth Over Time
Population
2
4
6
0
10
20
30
40
50
Years