Predator and Prey Dynamics

In the savannah in the middle of Africa, there is a struggle for life. A veritable “Circle of Life” is being seen through generations of animals. Scientists have been studying one particular group of organisms near “Pride Rock”.

In the period of five years, one male lion “Mufasa” ruled over the area. During this period, the predator and prey populations were reviewed and charted. The tables are below

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Date | Lions | Wildebeest | Antelope | Hyena |
| 1994 | 12 | 1900 | 400 | 32 |
| 1995 | 13 | 1950 | 425 | 34 |
| 1996 | 14 | 2000 | 450 | 37 |
| 1997 | 15 | 2050 | 475 | 38 |
| 1998 | 16 | 2100 | 500 | 42 |

After the leading male lion died in a stampede, a new male lion took over the pride. “Scar” ruled the pride over a period of 4 years. These four years were marked by drought and lower numbers of prey. Below is the data

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Date | Lions | Wildebeest | Antelope | Hyena |
| 1999 | 17 | 1403 | 200 | 42 |
| 2000 | 12 | 1204 | 176 | 28 |
| 2001 | 11 | 1101 | 156 | 24 |
| 2002 | 10 | 945 | 122 | 21 |

After that period a returning lion took over the pride. “Simba” took over the pride for the next few years and scientists recorded the data of his reign.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Date | Lions | Wildebeest | Antelope | Hyena |
| 2003 | 9 | 1258 | 156 | 20 |
| 2004 | 8 | 1402 | 245 | 21 |
| 2005 | 11 | 1499 | 287 | 28 |
| 2006 | 14 | 1567 | 345 | 31 |

Questions

1. Draw a simple line graph of the wildebeest and antelope.
2. Draw a simple line graph of the lions and hyena.
3. What do you notice about the relationship between the two graphs?
4. When looking at the overall data, what is noticed when you look that the relationship between predators and prey.