**Natural Selection Lab- Types of Selection**

For each of the following sets of data- graph the population sizes before and after the selective pressure, then come up with a scenario that could explain why the population changed.

|  |  |
| --- | --- |
|  | Number of Individuals |
| Size (in) | Before | After |
| 1 | 2 | 20 |
| 2 | 3 | 30 |
| 3 | 4 | 45 |
| 4 | 5 | 50 |
| 5 | 10 | 45 |
| 6 | 15 | 20 |
| 7 | 25 | 10 |
| 8 | 40 | 8 |
| 9 | 48 | 5 |
| 10 | 50 | 2 |
| 11 | 48 | 5 |
| 12 | 40 | 8 |
| 13 | 25 | 10 |
| 14 | 15 | 15 |
| 15 | 10 | 20 |
| 16 | 5 | 30 |
|  17 | 4 | 45 |
| 18 | 3 | 50 |
| 19 | 2 | 45 |
| 20 | 1 | 20 |

1. In this population, there is a millipede-like insect that varies in size from 1 inch to 20 inches. The live on a small tropical island are eaten by a praying-mantis like predator.

What type of selection is shown here? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Come up with a scenario that would explain why the population would change:

|  |  |
| --- | --- |
|  | Number of Individuals |
| Color | Before | After |
| Pure White  | 10 | 2 |
| Light Gray | 25 | 5 |
| Medium Gray | 50 | 15 |
| Dark Gray | 25 | 20 |
| Pure Black | 10 | 50 |

2. In this population, mice range from white to black and live on an island with white sands and black rocks. They are eaten by predatory hawks.

What type of selection is shown here? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Come up with a scenario that would explain why the population would change:

3. Giraffes have necks that vary in length from 1-3 meters. Giraffes are predated mostly by lions who stalk them through the tall grass. Their main source of food is leaves found on tall trees across the savanna.



|  |  |
| --- | --- |
|  | Number of Individuals |
| Neck Length | Before  | After |
| 1 | 10 | 2 |
| 1.2 | 15 | 8 |
| 1.4 | 25 | 20 |
| 1.6 | 35 | 50 |
| 1.8 | 45 | 75 |
| 2 | 50 | 50 |
| 2.2 | 45 | 20 |
| 2.4 | 35 | 8 |
| 2.6 | 25 | 2 |
| 2.8 | 15 | 0 |
| 3 | 10 | 0 |

What type of selection is shown here? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Come up with a scenario that would explain why the population would change: