**Brain-Storm: How could you find the population of beans in the jar quickly?**

**There are Four Ways to Determine Population Size**

**1. Direct Observation-**

*Examples*:

|  |  |
| --- | --- |
| Pros | Cons |
|  |  |

**2. Indirect Observation-**

*Examples*:

|  |  |
| --- | --- |
| Pros | Cons |
|  |  |

**3. Sampling-**

*Examples*:

|  |  |
| --- | --- |
| Pros | Cons |
|  |  |

**4. Mark-and Recapture Studies-**

*Examples*:

|  |  |
| --- | --- |
| Pros | Cons |
|  |  |

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**Populations can Change in Size**

1. Populations can increase in size through \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_.
2. Populations can decrease in size through \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_.
3. What is the easiest method to depict population size changes?
4. If the birth rate is > than the death rate the population \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
5. If the birth rate is < than the death rate the population \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
6. What is the difference between immigration and emigration?

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**Three more Important Factors in Population Size are:**

**1. Population Density-**

*Examples*:

**2. Limiting Factors-**

 *Examples*:

**3. Carrying Capacity-**

 *Examples*: