MBF 3C Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

U3 D2 Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Sampling**

**Scenario**

Natalie surveys people randomly from her on-line youth book club members as well as the lists of youth cardholders at the two nearest community libraries.

She returns to school and suggests to her friend on students’ council that the school should host a read-a-thon to raise money for prom since the participants in her survey all felt that it was a good idea.

What is the problem with her research?

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**Population:** the entire group being studied

In the example above, the population is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

If everyone in a population is surveyed, then the survey is called a **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**.

**CENSUS**

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| --- | --- |
| Advantages | Disadvantages |
|    |  |

**Sample:** the group of people taken from that population to be surveyed

In the example above, the sample is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**SAMPLE**

|  |  |
| --- | --- |
| Advantages | Disadvantages |
|  |  |

**Sampling Techniques**

**Simple** **Random Sample**:

* all selections are equally likely

Example: Drawing 5 names from a hat holding 30 names and surveying those 5 people.

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| PROS | CONS |
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**Systematic** **Random Sample**:

* every nth member of the population is surveyed

Example: Going through the phone book and surveying every 100th person.

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| PROS | CONS |
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**Stratified Random Sample:**

* the population is divided into groups, then a random sample is taken of each group.
* the number sampled from each group is proportional to the size of the group

Example: A school is divided into 4 groups by grade. There are 300 grade nines, 350 grade tens, 270 grade elevens and 320 grade twelves. Proportion of each group chosen: 10 %

\_\_\_\_\_ grade nines are surveyed, \_\_\_\_ grade tens,

\_\_\_\_ grade elevens and \_\_\_\_\_ grade twelves.

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| PROS | CONS |
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**Cluster Sample**

* the population is divided into groups
* a random number of groups is chosen (It could be just one group)
* all members of the chosen group(s) are surveyed

Example: A VP enters the cafeteria and randomly selects two tables. All students at those two tables are surveyed.

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| PROS | CONS |
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**Convenience Sample**

* A selection from the population is taken based on availability and/or accessibility

Example: To survey wood workers in Ontario, we ask people at several lumber yards and home improvement stores scattered about the province.

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| PROS | CONS |
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**Voluntary Sampling**

* People volunteer to take part in a study.

Example: 1) Psych 101 students at Trent University are given an additional 2 % at the end of the year if they volunteer for any two upper-year psychology surveys and/or studies.

 2) Voting on American Idol.

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| PROS | CONS |
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Example: For each population below, use the method indicated to show how you would pick a sample of 16 people.

a) Systematic Random Sampling

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b) Stratified Random Sampling

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c) Cluster Random Sampling

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