## POPULATION AND SAMPLE TYPES

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| **Population vs. Sample** | Population: Everything being studied.<br><br>Sample: a small group from pop. |
| **Convenience Sample** | Sample created by those easily accessible.<br>ex. First 10 people who enter the school. |
| **Random Sample** | Selecting a "specific" person from a random group<br>ex. choosing a name from a hat. |
| **Stratified Sample** | a sample created from splitting ~~eve~~ the pop. into groups & choosing a percentage from each.<br>ex. 10% of all grade 7,8,9, Staff. |
| **Systematic Sample** | a sample created from selecting every person from a set interval from a list.<br>ex. choosing every 10th person from alphabetized student list. |
| **Voluntary Response** | Survey everyone, only those who want to respond will. |

### Example 2: Identify The Sample
For each situation, describe how the sample could be selected. Identify the type of sample.

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| **Ex.2** | A teacher wishes to get feedback from her class about the school dance. She plans to survey 5 students out of a class of 30.<br>Random - choose from hat |
| **Ex.2** | A telephone company wants to determine whether a fitness centre would be well used by its 3000 employees. The company plans to survey 300 employees.<br>Systematic - 10th person from list |
| **Ex.2** | A chain store is trying to decide whether to open a store in Camrose, Alberta. The company decides to survey people in Camrose and three nearby towns.<br>Camrose - 16000   Bashaw - 825   Tofield - 1876   Daysland - 876<br>Stratified - groups |
| **Ex.2** | A marketing research company mails surveys to all of the adult residents in a town. The survey asks about brands of consumer products. The residents are asked to mail their responses in a prepaid envelope.<br>Voluntary - choose to respond. |
| **Ex.2** | A restaurant owner wants to know the favourite pizza topping of his customers. He plans to survey every customer who orders a pizza in his restaurant between 5:00 p.m. and 10:00 p.m. one evening.<br>Convenient - easy to access |
| **SYK** | • A coach puts the names of all of the basketball players into a hat and draws one name for a free basketball.<br>• A questionnaire is sent to every ninth person on an alphabetical list of a store's credit card customers.<br>• The student council invites all students to provide ideas for activities. |

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### Example 1: Identify The Population
Identify the population for each situation. Then, state whether you would survey the population or a sample of the population. Explain your reasoning.

**Ex.1**

A bicycle store owner wants to know which brand of mountain bike her customers prefer.

Pop. bicycle store customers

Sample: could be a lot of customers, not all could be buying bikes

**Ex.1**

The school board wants to know how many hours of homework students do each day.

Pop. Students at all division schools

Sample - too many

**Ex.1**

A candle manufacturer wants to know how many of its candles are made with flaws.

Pop. all candles.

Sample - depends on size of manufacturer.

**SYK**

The Royal Garden restaurant needs to know which main dish its customers favour.

**SYK**

Stephan wants to find out if teachers in Canada prefer to wear glasses or contact lenses.

**SYK**

A junior hockey team wants to find out why some people who bought season tickets last year are not buying them this year.