

**Unit 4: Review**

- Primary vs. Secondary Data
- Types of Sampling (simple random, systematic random, stratified random)
- Scatter Plots - Dependent and Independent Variables
- Lines and Curves of Best Fit
- Interpolation and Extrapolation
- Distance/Time Graphs

Example 1:

Identify the type of sampling in the following examples:

- You randomly choose students proportionately from each grade based on the number of students in the grade.
- Students are chosen by randomly selecting a student number from a list and then choosing every tenth person after that.
- You select students in your phys ed class to interview about the need for newer gym equipment.
- All students names are put in a hat and 100 names are selected randomly to interview.

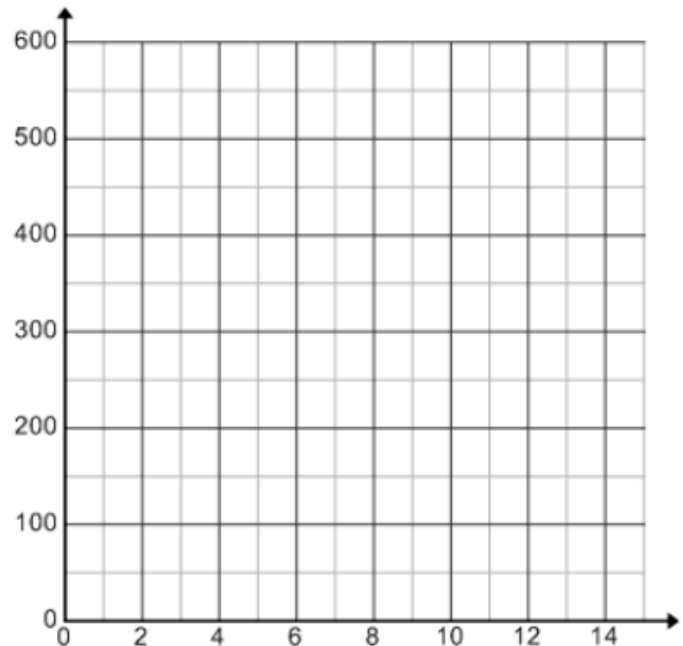
**Example 2: Graphing and Analyzing Sample Question**

Two ships are travelling on parallel courses that are 10 km apart. This table shows the distance between the two ships over a 12-hour period.

1. Identify the dependent and independent variables.

2. Make a scatter plot of the data.

Time (h)	Separation (km)
0	575
1	530
2	500
3	445
4	410
5	380
6	330
7	300
8	255
9	210



- Describe the relationship between the variables and draw a line of best fit.
- Identify any outliers.
- Predict when the ships will be closest. Did you use interpolation or extrapolation to make your prediction?