

## Group Task #1

In groups of 2-3, identify the population, parameter, sample, and statistic for the two scenarios provided.

1. An office supply store mails a survey to teachers who make credit card purchases at the store in order to determine customer satisfaction. This month, surveys were mailed to 1000 teachers, chosen at random, and 137 teachers returned the survey form, with 32% of those teachers responding they were extremely satisfied with the store.
2. A specialized shaper tool in a factory prepares “pencil sandwiches” to become Ticonderoga pencils. “Pencil sandwiches” are machined into circular pencil shapes. For quality control purposes, the machine operator must do periodic inspections to make sure the machine is manufacturing pencils of the correct diameter. Each hour, the machine operator inspects a sample of 4 pencils and records the average diameter of those pencils.

## Group Task #2

In groups of 2-3, determine whether the given variables are categorical or quantitative. For any quantitative variable, also name the unit in which it was measure, if given.

3. The State Education Department requires local school districts to keep these records on all students: age, race or ethnicity, days absent, current grade level, standardized test scores in read and mathematics, zipcode, and any disabilities or special education needs.
4. In performing research for an ecology class, students at a college in upstate New York collect data on streams each year. They record a number of biological, chemical, and physical variables, including the stream name, the substrate of the stream (limestone, shale, or mixed), the acidity of the water (pH), the temperature ( $^{\circ}\text{C}$ ), and the BCI (a numerical measure of biological diversity).

## Group Task #3

Often in preparing new teachers, teacher educators are tasked with helping pre-service teachers to be better consumers of classroom data. Below are datasets from Mrs. X’s classroom. Quickly sketch a histogram or dotplot of the data, find their shapes, means, medians, standard deviations, ranges, and identify any unusual features.

College Entrance Exam Score	Unit Exam Score	Pre-Test Score	Age of Student
12	30	20	15
13	55	20	14
14	60	20	14
15	60	25	14
16	65	25	15
16	65	25	15
17	70	25	14
17	70	30	16
18	75	30	14
18	75	30	14
19	80	30	15
19	80	30	15
20	80	35	18
20	85	35	16
20	85	35	16
21	85	35	16
21	85	35	18
21	85	40	17
22	90	40	15
22	90	40	16
23	90	75	17
23	90	70	16
24	90	70	17
24	95	65	17
25	95	55	18
26	95	55	16
27	95	60	17
28	100	60	17
29	100	65	18
30	100	80	18