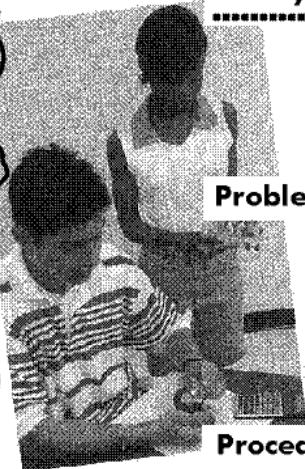


## Activity 2: Sampling the Quality of a Product



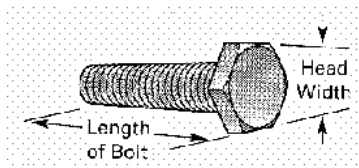
**Equipment** Calculator with statistical functions  
20 large machine bolts and nuts  
Vernier caliper  
Micrometer caliper

### Problem Statement

Most products include tolerances in their specifications. In this laboratory, you will measure the dimensions of a sample of machine bolts. Then, based on your measurements, you will determine how well the machine bolts meet a given set of tolerances.

### Procedure

- a** Measure the length of each of the 20 bolts with the vernier caliper, and measure the head width of each bolt with the micrometer caliper. Record the results in a table similar to the one shown below:



Head Width	Overall Length
0.789 in.	5.11 cm
.	.
.	.
.	.
Mean: _____	Mean: _____