

## Exercise 7a

### Problem Cause Data Collection – Sampling

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Instructions:**

1. Use the problems from either Exercise 6a Brainstorming or 6b Brain-writing.
2. Develop sampling plan.

#### Steps

1. Assess the nature of the population to be sampled to decide on a suitable type of sampling approach: random, systematic, stratified or cluster.
2. After deciding which type of sampling is to be used, determine:
  - a. How many samples need to be collected?
  - b. What is the preferred size of samples?

**Note: Refer to ANSI Z1.4 for Attributes or ANSI Z1.9 for Variables**

3. Will the collected data be *discrete* or *continuous*?
  - a. **Discrete** – correct/wrong, yes/no...
  - b. **Continuous** – measurable (inches, pounds...)
4. Factors to consider:
  - a. The size of the total population
  - b. How difficult will it be to collect the data
  - c. How costly will it be to collect the data
  - d. The expected level of variation in the sampled population
  - e. What the consequences of inaccurate samples could be
5. Collect the sampling of data according to the chosen sampling approach.
  - a. By calculating simple figures such as averages, means, and so on you can test whether the sample is a reasonable representation of the population.
6. Identify your sampling plan in table provided below.

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*Sampling Plan*

<b>Type of Sampling Approach:</b>
<b>How many samples need to be collected?</b>
<b>What is the preferred size of sample?</b>
<b>Will the data be discrete or continuous?</b>
<b>Factors considered?</b>
<b>Collecting the samples:</b>