

Part II: Producing Data

Producing Data accounts for 10%-15% of the material covered on the AP Exam. “Data must be collected according to a well-developed plan if valid information on a conjecture is to be obtained. This plan includes clarifying the question and deciding upon a method of data collection and analysis.”

Check your understanding of the following topics from Chapter 5 of YMS2e.

II. SAMPLING AND EXPERIMENTATION: PLANNING AND CONDUCTING A STUDY

A. Overview of methods of data collection

- 1. Census
- 2. Sample survey
- 3. Experiment
- 4. Observational study

B. Planning and conducting surveys

- 1. Characteristics of a well-designed and well-conducted survey
- 2. Populations, samples, and random selection
- 3. Sources of bias in sampling and surveys
- 4. Sampling methods, including simple random sampling, stratified random sampling, and cluster sampling

C. Planning and conducting experiments

- 1. Characteristics of a well-designed and well-conducted experiment
- 2. Treatments, control groups, experimental units, random assignments, and replication
- 3. Sources of bias and confounding, including placebo effect and blinding
- 4. Completely randomized design
- 5. Randomized block design, including matched pairs design

D. Generalizability of results and types of conclusions that can be drawn from observational studies, experiments, and surveys

AP Exam Free Response Questions Related to Producing Data in YMS2e

Adapted from a compilation by Jared Derksen and Duane Hinders

Chapter 5: Producing Data							
1997:2	1998:3ab	1999:3	2000:5	2001:4	2002:2	2002B:3	2003:4
2003B:3a,4	2004:2,3d	2004B:2,6c	2005:1bc,5ac	2005B:3	2006:5	2006B:5,6f	