

Answer on Question #60550 – Math – Statistics and Probability

Question

From the list of populations and samples, which samples are representative of the population?

- 1.-Population: Healthy adults from single geographical area for a vaccine study. Sample: Employees at a local factory
- 2.-Population: Individuals infected with hepatitis C virus. Sample: Patients presenting with hepatitis C virus at a liver clinic in a teaching hospital
- 3.-Population: Women diagnosed with breast cancer between 1990 and 1999. Sample: Women first attending hospital with breast cancer between 1990 and 1999
- 4.-Population: study of the general population to assess the prevalence of a number of blood-borne viruses. Sample: Blood donors

Solution

1. Sample is representative.

Employees at a factory are likely to give a broad range of occupations and regions of residence, and as they are working, they are likely to be reasonably healthy.

2. Sample is not representative.

Sample is self-selected.

3. Sample is representative.

As almost all women diagnosed with breast cancer would require treatment this would probably lead to a representative sample.

4. Sample is not representative.

Sample is self-selected.

Answer: 1 and 3.