

MATC9 Ch04.2 Key Concepts 4 Random Sampling Techniques Worked Example

Example: Samburu has been hired to survey shoppers at a mall as to whether musicians should be allowed to perform in the mall. How can he set up a systematic sampling technique?

Solution: There are many ways of doing this. One way is to interview the first person who enters the mall after a randomly-selected time. After that, every tenth customer can be interviewed.

Practice:

1. Mamiya is in charge of customs and immigration at an airport. She needs to select travellers at random for more thorough spot checks. How can she set up a simple random sampling technique?

2. Simon has noted that patrons of his restaurant are 5% teenagers, 25% young adults, 50% middle-aged adults, and 20% senior citizens. He wants to play music selections that his customers will like. How can he set up a stratified sample to determine their wishes?

Answers:

Answers will vary. Mamiya can make a spinner with the number of customs desks on it, and two spinners going from 1 to 6. This allows her to select a desk and time at random. The traveller coming through that desk at that time will be spot checked.

Simon can select customers in proportion to their age groups. Since few teenagers patronize his restaurant, it would not be fair to let them select an equal share of the music.