

Answer on Question #55362 – Math – Statistics and Probability

An amusement park has opened a new roller coaster. it is so popular that people are waiting up to 3 hours for a 2 minute ride. Concerned about how patrons (who paid a large amount to enter the park and ride on the rides) feel about this they survey every 10th person on the line for the roller coaster starting from a randomly selected individual.

- a) what kind of sample is this?
- b) what is the sampling frame?
- c) is it likely to be representative ?
- d) what members of the population are likely to be omitted?

Solution

- a) It is systematic sampling;
- b) patrons in line on that day at that time;
- c) no. Only those who think it worth the wait are likely to be in line. Also, those who don't like roller coasters aren't in the sampling frame, so the poll will not get a fair picture of whether park patrons feel about long lines for roller coaster rides.
- d) they need to also sample guest who are not in line for the coaster. There is selection bias.