

Name _____

Date _____ Pd. _____

Notes: Probability and Simulation

Performing Simulations A method that is often used to find experimental probability is a _____. A simulation allows you to use objects to act out an event that would be difficult or impractical to perform.

Example

In one baseball season, Pete was able to get a base hit 42 of the 254 times he was at bat.

a. What could be used to simulate his getting a base hit?

b. Describe a way to simulate his next 10 times at bat.

Name _____

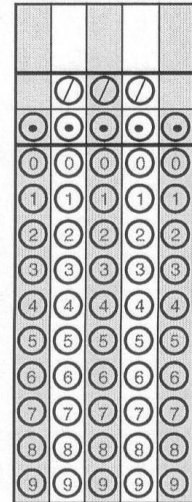
Date _____ Pd. _____

Exit Card: Probability and Simulation

A reporter surveyed 300 randomly selected people of all ages about their opinion of a new song. The results are shown in the table below.

SURVEY RESULTS

Age Group	Liked It	Did Not Like It	No Opinion
Younger than 25	55	30	15
25–46	50	30	20
Older than 46	32	60	8



What is the probability that a person who had no opinion of the new song was older than 46?

BCR

A school has 1,000 students. The principal of the school wants to select a sample of twenty students to participate in a survey. Below are two sampling methods that the principal is considering:

Method 1: Select the first twenty students that arrive at school in the morning.

Method 2: Select twenty students by assigning each student a number from 1 to 1,000 and generating twenty different random numbers.

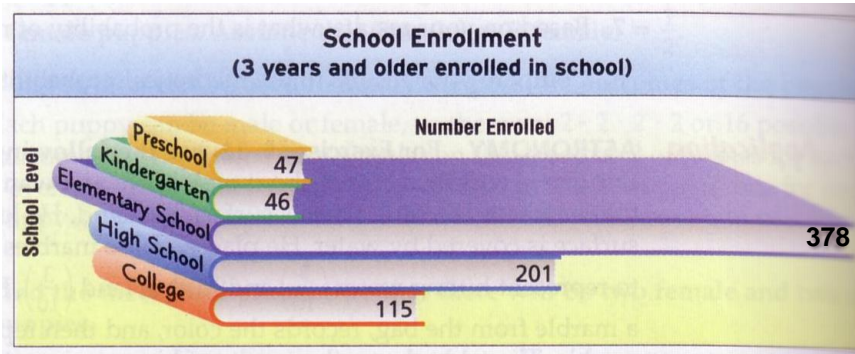
Which method gives a sample that is more representative of the school's population? Use mathematics to justify your answer.

Name _____

Date _____ Pd. _____

Homework: Pages 786 – 787 (23, 24, 32, 34)

The Lewistown City Council sent surveys to randomly selected households to determine current and future enrollment for the local school district. The results of the survey are shown in the table.



23. Based on the survey, what is the probability that a student chosen at random is in elementary school or high school?
24. Suppose the school district is expecting school enrollment to increase by 1800 over the next 5 years due to new buildings in the area. Of the new enrollment, how many will most likely be in kindergarten?

Player	1	2	3	4	5	6
Heads	38	31	29	27	26	30
Tails	12	19	21	23	24	20

32. The captain of a football team believes that the coin the referee uses for the opening coin toss gives an unfair advantage to one team. The referee has players toss the coin 50 times each and record their results. Based on the results, do you think the coin is fair? Explain your reasoning.

34. Ramón tossed two coins and rolled a die. What is the probability that he tossed two tails and rolled a 3?

A $\frac{1}{4}$

B $\frac{1}{6}$

C $\frac{5}{12}$

D $\frac{1}{24}$