

Probability: Everyday Decisions Based on Probability**II.B. Student Activity Sheet 8: Choosing Classes**

Four teachers offer Zane’s favorite computer class at different times during the day. The school counselor asks Zane if he prefers a morning or afternoon class. Below is a list of teachers and the periods they teach this class. The morning classes are 1st, 2nd, and 3rd periods, and the afternoon classes are 4th, 5th, and 6th periods.

- Mr. Nelson—2nd, 4th, 5th, 6th
- Ms. Trevino—1st, 2nd, 3rd, 4th, 5th
- Mr. Garza—1st, 3rd, 4th, 6th
- Ms. Jones—1st, 2nd, 3rd, 6th

1. Before answering the counselor’s question, Zane wants to list all the possibilities so he can make a choice that gives him the highest probability of getting a teacher he prefers. Create a table and a tree diagram that illustrate the possibilities.
2. Before deciding on a morning or afternoon class, Zane remembers he wants to take his math class during 3rd period. What is the probability that he will be assigned the computer class during this time?
3. Zane prefers to be in the class of Ms. Trevino or Mr. Nelson. Should he pick the morning or the afternoon? Explain your reasoning.
4. After checking the schedule, the counselor told Zane that Mr. Garza’s classes are filled. How does this information affect the probability of Zane getting any afternoon class? If Zane asks for an afternoon class, how does this affect his probability of getting Mr. Nelson or Ms. Trevino?
5. Because this is a required class for all students and Mr. Garza’s classes are filled, the school adds another teacher, Ms. Lopez. She will teach 1st and 6th periods. Does this fact affect the probability of getting Mr. Nelson in the morning?
6. While Zane is calculating probabilities so he can make his decision, the class offerings change. (Mr. Garza’s classes fill, and Ms. Lopez is added.) If Zane requests an afternoon class, what is his probability of getting Ms. Trevino for 4th period?
7. **REFLECTION:** What other factors might influence Zane’s class selection? Would these factors be reflected in the diagram or data? If so, describe the new diagram or set of data.

Probability: Everyday Decisions Based on Probability

II.B. Student Activity Sheet 8: Choosing Classes

8. **EXTENSION:** Meet with the person on your campus who is responsible for creating the master schedule. Prepare a set of questions similar to the ones that Zane faced and record the responses. Share your findings with the class, including at least one decision you can make based on those findings.