

1. The table below categorizes the preferences of 40 students in a junior class.

	Wearing Tennis Shoes	Not Wearing Tennis Shoes	Total
Boy	12	6	18
Girl	9	13	22
Total	21	19	40

Suppose you pick a student at random from this class. Find each of the following probabilities.

Event A: Wearing Tennis Shoes

Event B: Boy

Event C: Not Wearing Tennis Shoes

Event D: Girl

- $P(A)$
 - $P(A|B)$
 - Are the events Wearing Tennis Shoes and being a Boy independent? Explain.
 - Are the events Wearing Tennis Shoes and being a Boy Mutually exclusive? Explain.
 - $P(A|D)$
 - $P(D|C)$
 - $P(A \text{ or } B)$
 - $P(C \text{ and } D)$
 - Are the events Wearing Tennis Shoes and being a girl independent? Explain
2. About 12% of Americans are left handed. What is the probability that if 3 students were chosen at random that 2 would be left handed?

