Statistics **Chapter 4 Worksheet Addition Rule & Venn Diagrams**

- 1. Of 400 college students, 120 are enrolled in math, 220 are enrolled in English, and 55 are enrolled in both. If a student is selected at random, find the probability that
 - a. the student is enrolled in mathematics.
 - b. the student is enrolled in mathematics or English.
 - c. the student is enrolled in either mathematics or English, but not both.
- 2. In a group of 35 children, 10 have blonde hair, 14 have brown eyes, and 4 have both blonde hair and brown eyes. If a child is selected at random, find the probability that the child has blonde hair or brown eyes.

3. Amber, a college senior, interviews with Acme Corp. and Mills, Inc. The probability of receiving an offer from Acme is 0.35, from Mills is 0.48, and from both is 0.15. Find the probability of receiving an offer from either Acme Corp. or Mills, Inc., but not both.

 A survey of couples in a city found the following probabilities: The probability that the husband is employed is 0.85. The probability that the wife is employed is 0.60. The probability that both are employed is 0.55.

A couple is selected at random. Find the probability that

- a. at least one of them is employed.
- b. neither is employed.
- 5. One card is drawn from a standard deck of cards. What is the probability it is an ace or red?
- 6. A sample of automobiles dealerships found that 19% of automobiles sold are silver, 22% of automobiles sold are SUVs. 16% of automobiles are silver SUVs.
 - a. Are the two events mutually exclusive?
 - b. What is the probability that a randomly chosen sold automobile is silver or an SUV?
- 7. The following table shows the number of males and females wearing jeans to class on a certain day.

	Jeans	Other	Total
M	12	5	17
F	8	11	19
Total	20	16	36

- a. What is the probability that a person is male and wears jeans?
- b. Find the probability that a person is a female or a male.
- c. Find the probability that a person is a female or wears jeans.
- d. Find the probability that a person is male or wears jeans.