## Algebra 1 <br> WS 11.4B Compound Events

1. Five years after 650 high school seniors graduated, 400 had a college degree and 310 were married. Half the students with a college degree were married. Find each probability.
a. P(college degree or married)
b. $P($ college degree or not married)
c. $\quad \mathrm{P}$ (no college degree or married)

2. A bag contains 25 marbles: 10 black, 13 red, and 2 blue. A marble is drawn from the bag at random.
a. Explain why the events "getting a black" and "getting a red" are mutually exclusive
b. What is the probability of getting a red or a blue marble?
3. Numbers 1-10 are written on cards and placed in a bag. Find each probability.
a. $\quad \mathrm{P}$ (a number greater than 5 or an odd number)
b. $\mathrm{P}($ an 8 or a number less than 5$)$
c. $P($ an even number or a multiple of 6$)$
4. Of the 65 students going on a soccer trip, 43 are players and 12 are left - handed. Only 5 of the left - handed students are soccer players. What is the probability that one of the students on the trip is a soccer player or is left - handed?
5. Among 200 seats available on an international airliner, 40 are reserved for smokers (including 16 aisle seats) and 160 are reserved for non-smokers (including 64 aisle seats). If one passenger is randomly selected, find the probability of getting an aisle seat or a seat in the smoking section.
6. A survey of 400 randomly selected heads of household found 301 people who own cars ( 116 of whom are women) and 99 other people who don't own cars ( 59 of whom are women). If one of these subjects is randomly selected, find the probability of:
a. selecting a woman
b. selecting a woman or someone who owns a car
c. selecting a man or someone who doesn't own a car
7. A card is drawn at random from a standard deck of playing cards. Find the probability that it is:
a. a nine
b. a nine or a queen
c. a nine or a diamond
8. A local survey asked 100 subjects for their opinions on a zoning ordinance. Of the 62 favorable responses, there were 40 males. Of the unfavorable responses, there were 15 males. If one of these subjects is randomly selected, find the probability of getting a female or a favorable response.
