

## Possible answers to selected problems from Section 27.2

### Activity

1. If I toss three coins a large number of times, what fraction of the time will I get two or more heads?
2. Suppose I draw a ball out of an *opaque* bag that contained two red balls and three blue balls, and then replace the ball. If I repeat this process a large number of times, what fraction of the time will I get a red ball?
3. If I consider a large number of *tomorrows* (i.e. days following one with the *same date* or the *same conditions* as today), what fraction of them will have rain?

### Exercises:

1. a. The fraction of the time that the U.S. Attorney General was a woman, when you look at a large number of Attorney Generals.  
b. The fraction of students that read the newspaper more intelligently, when you look at a large number of students who have taken this course.  
c. The fraction of babies that were girls, when you look at a large number of women who already have (*at least*) two sons.  
d. The fraction of planned third children that were girls, when you look at a large number of women whose first two children were boys.  
e. The fraction of women that were elected President of the United States, when you look at a large number (all) of the U.S. Presidential elections (*conducted at times with the same level of gender equality*).  
f. The fraction of the time that it snowed in this city, when you look at a large number of *tomorrows* (i.e. days following one with the *same date* or the *same conditions* as today).
3. A **probabilistic situation** involves a process that can be repeated a large number of times. Whereas, an **uncertain situation** may be an isolated occurrence that is difficult or impossible to repeat a large number of times.