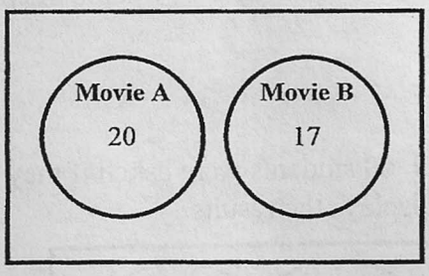
Movie Probability

1. This data was collected and recorded from both 6th grade classes at our school. All the students in both classes were asked if they saw Movie A or B. The Venn diagram displays the results.



   a. If there are a total of 50 students in both classes, how many students saw neither of the two movies? Write the answer in the Venn diagram inside the rectangle, but outside the two circles.

   b. What is the probability that a student selected at random from the 6th grade saw Movie A?

   c. What is the probability that a student selected at random from the 6th grade saw either Movie A or Movie B?

   d. What is the probability that a student selected at random from the 6th grade saw neither of the two movies?

   e. What is the complement of the probability that a student selected at random from the 6th grade saw either Movie A or Movie B?

2. There are 50 students in the two 6th grade classes.

Gender	Movie A	Movie B	Did not see either movie	Total
Male	14	8	10	32
Female	6	9	3	18
Total	20	17	13	50

   a. What is the probability that a student selected at random from the 6th grade saw one of the movies?

   b. What is the probability that a student selected at random from the 6th grade saw Movie A?

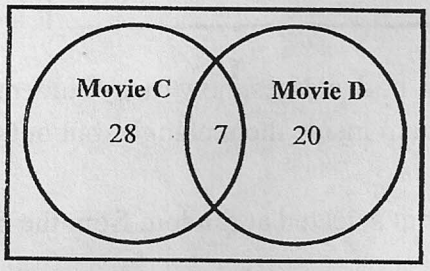
   c. What is the probability that a student selected at random from the 6th grade saw Movie A and was a male?

   d. Of the students who saw Movie B, what is the probability that the student was a female?

e. What is the probability that a student selected at random from the 6th grade saw Movie B given that the student was male?

f. Given that a student saw either Movie A or Movie B, what is the probability that a student selected at random was female?

3. In two 7th grade classes at our school, 60 students were asked if they saw Movie C, Movie D, or both Movie C and D. The Venn diagram displays the results.



a. How many students saw at least one of the movies?

b. How many students saw neither of the movies?

c. How many students saw Movie C?

d. How many students saw Movie D?

e. How many students saw only Movie C?

f. What is the probability that a student selected at random from the 7th grade saw Movie C and Movie D?

g. Of the students who saw Movie C, what is the probability that a student saw both movies?

h. Of the students who did not see Movie C, what is the probability that they saw Movie D?