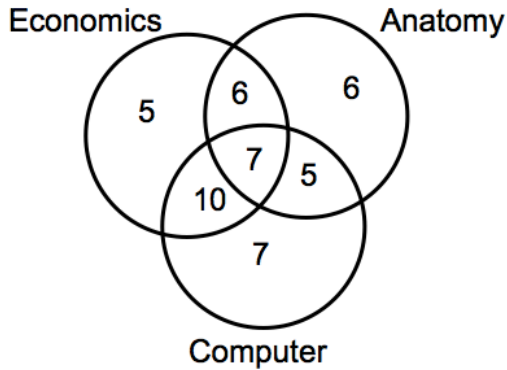


1. Explain the meaning of mutually exclusive events and the meaning of inclusive events. Give examples of each.

2. Describe how to find the complement of the event “rolling 1” or “rolling 2” on a number cube.

3. The economics, computer, and anatomy classes have 28 students, 29 students, and 24 students, respectively. Some students are taking more than one of the classes as indicated by the diagram. Find the probability that a randomly selected student from these classes is taking at least two of the classes.



Questions 4-6: A number cube is rolled once, and the number on the top face is recorded. Find the probability of each event.

4. 5 or 6

5. even or 3

6. not 1

Questions 7-8: The table at the right shows all of the possible outcomes of rolling two number cubes. Using the table, state whether the events in each pair below are inclusive or mutually exclusive. Then find the probability of each pair of events.

7. a sum of 2 or a sum of 4

8. a sum greater than 4 or a sum of less than 7

(1,1)	(1,2)	(1,3)	(1,4)	(1,5)	(1,6)
(2,1)	(2,2)	(2,3)	(2,4)	(2,5)	(2,6)
(3,1)	(3,2)	(3,3)	(3,4)	(3,5)	(3,6)
(4,1)	(4,2)	(4,3)	(4,4)	(4,5)	(4,6)
(5,1)	(5,2)	(5,3)	(5,4)	(5,5)	(5,6)
(6,1)	(6,2)	(6,3)	(6,4)	(6,5)	(6,6)

9. How many integers from 1 to 600 are divisible by 2 or by 3?

10. Find the probability that a random integer from 1 to 600 is divisible by neither 2 nor 3.

Questions 10-11: Use the given probability to find $P(E^c)$

11. $P(E) = \frac{4}{11}$

12. $P(E) = \frac{1}{3}$

13. $P(E) = .1942$

14. In a group of 300 people surveyed, 46 like only cola A, 23 like only cola B, 18 like only C, 80 like both colas A and B, 66 like both colas A and C, 45 like both colas B and C, and 12 like all three colas. Find the probability that a randomly selected person from this survey likes none of these colas.

Questions 13-14: The table shows the composition of the 106th Congress of the United States (1999-2001) according to the political party.

Find the probability that a randomly selected member of Congress has the following:

15. a House Democrat *or* a Senate Republican

	Democrat	Republican	Total
House	211	222	433
Senate	45	55	100
Total	256	277	533

16. a House Republican *or* a Senate Democrat

Answer Key:

1. Answers may vary

3. $\frac{14}{23}$

5. $\frac{2}{3}$

7. $\frac{1}{9}$

9. 400

11. $\frac{7}{11}$

13. .8058

15. 49.9%