**CHAPTER 10**

10.32: (a) Legitimate. (b) Legitimate (even if the deck of cards is not!). (c) Not legitimate (the total is more than 1).

10.36: (a) The given probabilities add to 0.96, so other colors must account for the remaining 0.04. (b) *P*(silver or white) = 0.26 + 0.16 = 0.42, so *P*(neither silver nor white) = 1 − 0.42 = 0.58.

10.41: (a) It is legitimate because every person must fall into exactly one category, the probabilities are all between 0 and 1, and they add up to 1. (b) P(15–19-year-old with others) = 0.169. (c) P(15–19-year-old) = 0.171—the sum of the numbers in the first column. (d) P(lives with others) = 0.532—the sum of the numbers in the third row.

10.42: (a) A corresponds to the outcomes in the first column and the third row. (b)\_Adding up those 6 outcomes gives P(A) = 0.534. (Note that this is different from the sum of the probabilities in (c) and (d) of Exercise 10.41 because that sum counts the overlap (0.169) twice.)

**CHAPTER 12**

12.32: Let W be the event that a whale is seen. Let D be the event that a dolphin is seen. The Venn diagram is provided below. (a) P(W) = 0.05 + 0.15 = 0.20. (b) P(W and not D) = 0.05. (c) Yes, since P(W and D) = 0.15 = P(W)P(D) = (0.20)(0.75) = 0.15.

