

1 through 10 are written on index cards and placed in a box. What is the probability that a student can take one foreign language each term. About 37% of the students take French. What is the probability that a student can take Spanish or French?

$0.5 \cdot 0.7 = 0.35$
 $0.5 \cdot 0.4 = 0.2$
 $0.35 + 0.2 = 0.55$

8. A football team has a 70% chance of winning when it does not snow, but only a 40% chance of winning when it snows. Suppose there is a 50% chance of snow. Find the probability of winning when it snows.

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7. Independent or Dependent: A student in your history class is selected at random. A student in your history class is selected at random. Remaining students is selected at random.

6. The senior class is 55% female and 32% of the class are females who play a competitive sport, given that the student is female. The probability that a student plays a competitive sport, given that the student is female, is 0.32.

$0.32 \div 0.55 = 0.58$

5. Only 93% of the airplane parts being examined pass inspection. What is the probability that a student will pass inspection?

$0.93 \cdot 0.93 \approx 0.86$

a. You select black socks on Monday and white socks on Tuesday.
 $\frac{3}{5} \cdot \frac{8}{15} = \frac{24}{75} = \frac{8}{25} \approx 0.32$

b. You select red socks on Monday and black socks on Tuesday.
 $\frac{1}{3} \cdot \frac{8}{3} = \frac{8}{9} \approx 0.89$

4. You have a drawer with five pairs of white socks, three pairs of black socks, and one pair of red socks. Find the probability of each event.

3. A fair number cube is tossed. Find P(less than 2 or even).
 $\frac{1}{6} + \frac{2}{6} = \frac{3}{6} = \frac{1}{2}$

2. Suppose you have 7 CD's in a box. Four are rock, one is jazz, and two are country. Tomorrow, you do the same one CD without looking, play it, and put it back in the box. Find the probability that you choose a country CD both days?

$\frac{2}{7} \cdot \frac{2}{7} = \frac{4}{49} \approx 0.08$

1. Find the probability that a student is male and attends concerts.
 $0.51 \cdot 0.45 = 0.23$

b. Find the probability that a student is female and does not attend concerts.
 $0.49 \cdot 0.19 = 0.09$
 $0.51 \cdot 0.45 = 0.23$

c. Find the probability that a student attends concerts.
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9. At Mercer Island H.S. a student can take one foreign language each term. About 37% of the students take French. What is the probability that a student can take Spanish or French?

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