

Conditional Probabilities

If one person is selected from the table, find the probability that the person

<i>Marital Status of the U.S. Population, Ages 15 or Older, 2010, in Millions</i>					
	Married	Never Married	Divorced	Widowed	Total
Male	65	40	10	3	118
Female	65	34	14	11	124
Total	130	74	24	14	242

- 1) is not divorced
- 2) is not widowed.
- 3) is widowed or divorced.
- 4) has never been married or is divorced.
- 5) is male or divorced.
- 6) is female or divorced.
- 7) is male, given that this person is divorced.
- 8) is female, given that this person is divorced.
- 9) is widowed, given that this person is a woman.
- 10) is divorced, given that this person is a man.
- 11) has never been married or is married, given that this person is a man
- 12) has never been married or is married, given that this person is a woman

Complete.

- 13) Joey's hardware store orders nails from two different manufacturers. 6% of the nails produced by manufacturer A are defective. 3% of the nails produced by manufacturer B are defective. Joey orders more than 1000 nails per month. Joey orders 25% of nails from manufacturer A and the other 75% from manufacturer B. A nail is chosen at random and found to be defective. What is the probability that it was produced by manufacturer B?
- 14) Jenny's hardware store orders nails from two different manufacturers. 8% of the nails produced by manufacturer A are defective. 2% of the nails produced by manufacturer B are defective. Jenny orders more than 1000 nails per month. Jenny orders 10% of nails from manufacturer A and the other 90% from manufacturer B. A nail is chosen at random and found to be defective. What is the probability that it was produced by manufacturer A?

In a group of 30 students 15 are members of a club, 16 play sports, and 6 neither play sports or are a member of a club.

- 15) Find the probability of selecting a person who plays sports and is a member of a club.
- 16) Find the probability of selecting a person who does not play sports and is a member of a club.
- 17) A person who plays sports is selected. Find the probability that the person is also a member of a club.
- 18) A person who is a member of a club is selected. Find the probability that the person also plays sports.