

Name: _____

PROBABILITY WORKSHEET 2.3 Extra

1. While watching out their kitchen window, Mathia and Elias notice all the different birds using the birdbath over a period of an hour. Out of 143 birds, they count the following birds.

Type of Bird	Starlings	Cedar Waxwings	Purple Finches	Sparrows	Juncos
Frequency	39	31	18	33	22

If a bird is chosen at random, find the probability that it is

- a junco
 - a starling, a cedar waxwing or a purple finch
 - not a starling
2. Of 400 college students, 120 are enrolled in math, 220 are enrolled in English, and 55 are enrolled in both. If a student is selected at random, find the probability that
- the student is enrolled in mathematics.
 - the student is enrolled in mathematics or English.
 - the student is enrolled in either mathematics or English, but not both.
3. In a group of 35 children, 10 have blonde hair, 14 have brown eyes, and 4 have both blonde hair and brown eyes. If a child is selected at random, find the probability that the child has blonde hair or brown eyes.
4. Amber, a college senior, interviews with Acme Corp. and Mills, Inc. The probability of receiving an offer from Acme is 0.35, from Mills is 0.48, and from both is 0.15. Find the probability of receiving an offer from either Acme Corp. or Mills, Inc., but not both.
5. A survey of couples in a city found the following probabilities:
The probability that the husband is employed is 0.85.
The probability that the wife is employed is 0.60.
The probability that both are employed is 0.55.
A couple is selected at random. Find the probability that
- at least one of them is employed.
 - neither is employed.
6. Three people are selected from a group of seven men and five women. Find the probability that
- all three are men.
 - two are women and one is a man.
7. Given $S = \{1, 2, 3, 4, 5, 6\}$; $E = \{1, 2\}$; $F = \{2, 3\}$; and $G = \{1, 5, 6\}$. Are $E \cup G$ and $E' \cap F'$ mutually exclusive?