

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_

## Conditional Probability Worksheet (12-2)

1. Use the table below to find each probability for a randomly selected employee:

EDUCATION AND SALARY OF EMPLOYEES			
	Under \$20,000	\$20,00 to \$30,000	Over \$30,000
Less than high school	69	36	2
High School	112	98	14
Some College	102	193	143
College	13	173	245

- a)  $P(\text{employee has less than a high school education})$
  
- b)  $P(\text{employee earns under } \$20,000)$
  
- c)  $P(\text{employee earns over } \$30,000 \text{ and has less than a high school education})$
  
- d)  $P(\text{employee earns under } \$20,000 \text{ and has a college degree})$
  
- e)  $P(\text{employee earns over } \$30,000 \mid \text{has only high school education})$
  
- f)  $P(\text{employee has less than high school education} \mid \text{earns over } \$30,000)$

2. Use the table to find each probability for a randomly chosen student.

a)  $P(\text{male})$

GENDER AND COLLEGE MAJORS			
	Biology	Physics	Chemistry
Male	40	16	35
Female	15	24	20

b)  $P(\text{male or majors in Chemistry})$

c)  $P(\text{majors in Physics} \mid \text{male})$

3. Use the sample space  $\{5, 6, 7, 8, 9, 10, 11, 12, 13, 14\}$  to find the probability for a randomly selected #.

a)  $P(\text{integer})$

b)  $P(\text{less than } 10 \mid \text{less than } 13)$

c)  $P(\text{greater than } 8 \mid \text{less than } 11)$

d)  $P(\text{greater than } 7 \mid \text{greater than } 12)$