Name_____ Date _____

Day 4 – Conditional Probability

Conditional Probability:

- Contains a condition that may limit (or restrict) the sample space for an event.
- You can write a conditional probability using the notation:

P(B | A)=P(B given A)

"The probability of event B, **given** event A."

- The formula for conditional probability is:

$$P(B \mid A) = \frac{P(A \cap B)}{P(A)}$$

1. The table shows the results of a class survey. Find P(own a pet | female).

Do you own a pet?	Yes	No
Female	8	6
Male	5	7

2. The table shows the results of a class survey. Find P(wash the dishes | male)

Did you wash the dishes last night?	Yes	No
Female	7	6
Male	7	8

3. Using the data in the table, find the probability that a sample of not recycled waste was plastic. P(plastic | non-recycled)

Material	**Recycled**	**Not Recycled**
Paper	34.9	48.9
Metal	6.5	10.1
Glass	2.9	9.1
Plastic	1.1	20.4
Other	15.3	67.8

4. Researchers asked people who exercise regularly whether they jog or walk. Fifty-eight percent of the respondents were male. Twenty percent of all respondents were males who said they jog. Find the probability that a randomly selected person jogs given they are male.