Name: Key

Conditional Probability

Conditional Probability:

- Contains a condition that may limit the sample space for an event.
- You can write a conditional probability using the notation $P(B|A) = P(B \text{ given } A)$

↑ "Given that" ↳ denominator of fraction

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

Do you own a pet?	Yes	No	Tot
Female	8	6	14
Male	5	7	12
Total:	13	13	26

Probability of owning a pet given they're female.

$\frac{8}{14} = \boxed{\frac{4}{7}}$

2) 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
Total:	60.7	156.3

$\boxed{\frac{20.4}{156.3}}$

3 Green, 2 red, 1 Blue

3) **P(pulling 2 green socks I have already pulled out 1 green)**

$\boxed{\frac{2}{5}}$

4) **P(pulling 2 blue socks I pulled 1 blue)**

$\boxed{0}$

5) P(getting a 5 I spade)

$\boxed{\frac{1}{13}}$

~~6) P(pulling out 3 hearts I pulled out 1 heart)~~