

Name: Key Date: _____

Practice – Filling in Tables

The table below shows the gender of 40 randomly selected US high school students and whether or not they have allergies. 18 of the students have allergies, while 22 don't have allergies. 8 Males have allergies, while 9 males don't have allergies. Fill out the table, and answer the questions below.

- 9/20 1. Find $P(A)$ $18/40$
- 1/4 2. Find $P(A \cap F)$ $10/40$
- 3/4 3. Find $P(N \cup M)$ $30/40$
- 1/4 4. Find $P(\overline{N \cup M})$ $10/40$
- 10/23 5. Find $P(A | F)$
- 5/9 6. Find $P(F | A)$ $10/18$

	Female (F)	Male (M)	
Allergies (A)	10	8	18
No Allergies (N)	13	9	22
	23	17	40

Joshua did not have enough fertilizer to give to all 100 of the tulip bulbs last fall, so he planted some with fertilizer and some without it. 80 of the plants bloomed. Jay checked the blooming plants, and 48 of them had received fertilizer. Jay checked the non-blooming plants, and 8 had not received fertilizer.

- .6 or 3/5 7. What is the probability that a plant got fertilizer? $60/100$
- .8 or 4/5 8. What is the probability that a plant will bloom, given it was fertilized? $48/60$
- .92 or 23/25 9. What is the probability of picking a plant that was fertilized or bloomed? $92/100$
- .12 or 3/25 10. What is the probability of picking a plant

that was fertilized and did not bloom? $12/100$

	Fertilizer (F)	Without Fertilizer (W)	
Bloomed (B)	48	32	80
Did not Bloom (N)	12	8	20
	60	40	100

11. Are the events blooming and receiving fertilizer independent of each other?

$$P(B \cap F) = P(B)P(F)$$

$$\frac{48}{100} = \left(\frac{80}{100}\right)\left(\frac{60}{100}\right)$$

$$.48 = .48 \quad \text{Yes}$$