

Name _____

HW # 11-5 (2-way Tables)

Period _____

Fill in the rest of the table. The table lists the outcome of tests for Tuberculosis (a fatal lung disease). A “+” test means the result of the test indicates a person HAS TB. Sometimes these quick tests are inaccurate. If a person tests “+” the doctors will give a more accurate (and more expensive) test.

tested: 995

Tested Positive and have TB: 361

Have TB: 380

Tested Positive and do not have TB: 62

	“+” Test	“—” Test	Total
Have TB	361	(Question 1)	380
Don't have TB	62	(Q-2)	(Q-3)
Total	(Q-4)	(Q-5)	995

Answer the following questions from your table:

6. $P(\text{have TB}) = ?$
7. $P(\text{do not have TB}) = ?$
8. $P(\text{have TB and tested positive for TB}) = ?$
9. $P(\text{Have TB and tested negative for TB}) = ?$
10. $P(\text{Don't have TB and tested positive for TB}) = ?$
11. $P(\text{Don't have TB and tested negative for TB}) = ?$
12. $P(\text{Don't have TB given that they tested positive for TB}) = ?$ (Conditional probability!!!)
13. $P(\text{Don't have TB given that they tested negative for TB}) = ?$
14. $P(\text{Have TB given that they tested negative for TB}) = ?$
15. $P(\text{Have TB given that they tested positive for TB}) = ?$
16. $P(\text{Tested negative given that they don't have TB}) = ?$
17. $P(\text{Tested negative given that they have TB}) = ?$
18. $P(\text{Tested positive given that they don't have TB}) = ?$
19. $P(\text{Tested positive given that they have TB}) = ?$

Fill in the remainder of the 2-way table then answer the rest of questions on the homework.

	Right handed pitcher	Left handed pitcher	Total
Right handed batter	15	(Q-20)	34
Left handed batter	(Q-21)	8	(Q-22)
Total	35	(Q-23)	(Q-24)

- | | | |
|-------------------------|---------------------------------|--------------------------------------|
| 25. $P(\text{RHB}) = ?$ | 29. $P(\text{RHB and RHP}) = ?$ | 33. $P(\text{RHB} / \text{RHP}) = ?$ |
| 26. $P(\text{LHB}) = ?$ | 30. $P(\text{RHB and LHP}) = ?$ | 34. $P(\text{RHP} / \text{RHB}) = ?$ |
| 27. $P(\text{RHP}) = ?$ | 31. $P(\text{LHB and RHP}) = ?$ | 35. $P(\text{LHB} / \text{RHP}) = ?$ |
| 28. $P(\text{LHP}) = ?$ | 32. $P(\text{LHB and LHP}) = ?$ | 36. $P(\text{LHP} / \text{RHB}) = ?$ |