



House and Holmes: A Guide to Deductive and Inductive Reasoning

Teacher Handout 3: **Guide to Neighborhood Watch Exercise**

Blocks we can check Y:

- We know that Chestnut Street is Block A. (1)
- Block B has 45 people. (1)
- Walnut Street has yellow houses. (2)
- Block A has 44 people. (3)
- Oak Street has red houses. (4)
- Elm Street has blue houses. (4)

Blocks we can mark N:

- 44 people on Walnut Street. (2)
- Maple Street is Block D or E. (6)
- Chestnut Street has white houses. (7)

Inferences we can draw:

- The street with blue houses cannot have 40 people. (4)
- Maple street cannot have 45 people. (4)

What does this all tell us?

The white houses are on Maple Street (since we've eliminated them from every other street). That means that the green houses must be on Chestnut Street. Walnut Street (yellow houses) must be Block B (since from rule 7 we know that Chestnut is beside the block with yellow houses and from rule 1 we know that Chestnut is on Block A). That means that Maple Street (which we know from rule 6 must be A, B or C) must be Block C. And since we know that Elm Street has to be on a block that begins with a later letter than Oak Street (from rule 4), then since our only remaining blocks are D and E, Elm Street is Block E and Oak Street is Block D. We know that there must be more people living on Elm Street than there are on Maple Street (from rule 6 and rule 4), and we also know that there are more people living on Oak Street than there are on Elm Street (from rule 5). So there must be 40 people on Maple Street, 41 on Elm Street, and 42 on Oak Street.

Block A	Chestnut	44 people	Green
Block B	Walnut	45 people	Yellow
Block C	Maple	40 people	White
Block D	Oak	42 people	Red
Block E	Elm	41 people	Blue

