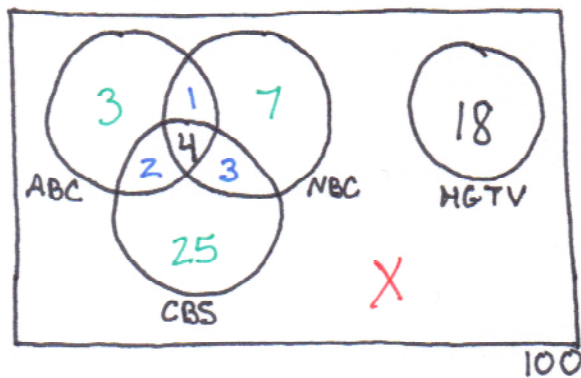


## Problem 146

Given: 100 TV watchers

18 watch HGTV and none of other 3

4 watch ABC, CBS, and NBC



Strategy:  
Venn Diagram

5 watch NBC and ABC (including the 4 that watch all three)  
 $\Rightarrow$  1 watches NBC and ABC and NOT CBS

6 watch CBS and ABC  $\Rightarrow$  2 watch CBS and ABC and NOT NBC

7 watch CBS and NBC  $\Rightarrow$  3 watch CBS and NBC and NOT ABC

10 watch ABC (including the 4 that watch all 3, the 1 who watches NBC and ABC and NOT CBS, and the 2 who watch CBS and ABC and NOT NBC)  $\Rightarrow$  3 watch ABC and NOT CBS and NOT NBC

15 watch NBC  $\Rightarrow$  7 watch NBC and NOT ABC and NOT CBS

34 watch CBS  $\Rightarrow$  25 watch CBS and NOT ABC and NOT NBC

Anybody not yet represented in the Venn diagram is represented by  $X$ , those TV viewers who do not watch CBS, NBC, ABC, or HGTV.

$$18 + 4 + 1 + 2 + 3 + 3 + 7 + 25 + X = 100$$

$$X = 100 - 18 - 4 - 1 - 2 - 3 - 3 - 7 - 25 = \underline{\underline{37}}$$

**B**